



THE NEW
SAILING DIRECTORY
FOR THE
STRAIT OF GIBRALTAR

AND THE
WESTERN DIVISION OF THE
Mediterranean Sea;

COMPREHENDING THE
COASTS OF SPAIN, FRANCE, AND ITALY.

From Cape Trafalgar to Cape Spartivento;

THE BALEARIC ISLES, CORSICA, SARDINIA, SICILY,
AND THE MALTESE ISLANDS;

WITH THE
AFRICAN COAST,

FROM TANGIER TO TRIPOLI, &c. &c.

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THE NEW
SAILING DIRECTORY
FOR THE
STRAIT OF GIBRALTAR
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MEDITERRANEAN SEA:

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THE COASTS OF SPAIN, FRANCE, AND ITALY,
FROM CAPE TRAFALGAR TO CAPE SPARTIVENTO;
THE BALEARIC ISLES, CORSICA, SARDINIA, SICILY, AND THE
MALTESE ISLANDS;

WITH

THE AFRICAN COAST,

From TANGIER to TRIPOLI, inclusive :

INCLUDING DESCRIPTIONS OF THE LIGHTHOUSES, AND COPIOUS TABLES OF POSITIONS,
OR OF LATITUDES AND LONGITUDES, OF ALL THE PRINCIPAL POINTS, &c.

ALSO

PARTICULAR DESCRIPTIONS OF THE COASTS, TOWNS, ISLANDS, HARBOURS, AND ANCHORAGES;
OCCASIONAL SKETCHES OF NATIONAL HABITS AND CUSTOMS; THE GENERAL PRODUCTS,
POPULATION, AND CONDITION, &c. OF THE RESPECTIVE PLACES.



COMPILED AND ARRANGED FROM A GREAT VARIETY OF DOCUMENTS, PUBLIC AND PRIVATE;
INCLUDING THE MOST USEFUL RELATIONS OF VOYAGERS AND TRAVELLERS;
ACCOMPANIED WITH INFERENCES FROM FACTS NOT GENERALLY KNOWN,

By JOHN PURDY, HYDROGRAPHER.

IMPROVED, BY CONSIDERABLE ADDITIONS, TO THE PRESENT TIME.

LONDON:

PRINTED FOR R. H. LAURIE,

Chart-seller to the Admiralty, the Honorable Corporation of Trinity-House, &c.

NO. 53, FLEET STREET.

1840.

* * COMMUNICATIONS FOR THE FUTURE IMPROVEMENT OF THIS WORK
ARE RESPECTFULLY SOLICITED.

[Entered at Stationers' Hall.]

ERRATA, &c.

Pages iv and 65.—The Harbour-light of Cassis, lighted from the 1st of November, 1840, is a fixed light, seen to the distance of three leagues. The tower is on the left side of the entrance.

Pages iv and 65.—LA CIOTAT.—The tower first lighted on the 1st of November, 1840, is a new one, constructed on the head of the *New Mole*, at 120 yards to the south-eastward of the light on Fort Berouard. Both lights are fixed, and seen at an equal distance; they cannot, therefore, be mistaken for that of Cassis.

To the announcement of these new lights it was added that, from the same date, a small fixed light would be exhibited on the fort of the *Isle of St. Marcou*, in the English Channel, latitude $49^{\circ} 29' 55''$, and longitude $1^{\circ} 9' W$.

Another at *Port Navalo*, on the eastern side of the entrance of the Morbihan, Bay of Biscay. The Lighthouse of the *Bassin d'Arcachon*, mentioned in the Directory for the Bay of Biscay, (page 26) has been lighted from the date above-mentioned.

Page 2, line 9 from the bottom, read $4\frac{1}{2}$ miles S.E. [S. $67^{\circ} E$.]

3, line 5, for East read West.

189, lines 4, 5, 6, 7, 8, to be erased. See page xxxiii.

P R E F A C E.

ON presenting to the Reader this Improved Edition of SAILING DIRECTIONS for the STRAIT and MEDITERRANEAN SEA, it may be proper to notice that it is an important portion of a work, the laborious result of much and long-continued inquiry, which first appeared in the year 1826.

Not long anterior to that date, the nautical world had been favored with the excellent Surveys of *Captain Beaufort, Captain Smyth, &c.*, whose names are identified with all future knowledge of the subject. These Surveys most happily developed vast tracts of Coast, which, until their appearance, were comparatively unknown; and they rectified many other tracts which had been imperfectly surveyed. The pure science which distinguishes these works was, of course, combined in our volume with the preceding descriptions of *Tofino* and other eminent Surveyors, and enabled us to produce, *not*, as we then observed, a *perfect* work, but certainly one such, for the *Mediterranean Sea*, as had *not before appeared*, and of which ample, though illiberal, use has been made in the construction of similar publications.

Our thanks are justly due to the respected friends who have contributed to the circulation of the work, and to the improvement of the present edition. We trust that such favors will be continued for *future* improvement.

The Second volume comprehends the *Eastern Division of the Mediterranean Sea*, and includes the *Adriatic Sea* or *Gulf of Venice*, the *Ionian Isles, Archipelago*, and *Levant*, the *Sea of Marmara*, and the *Euxine* or *Black Sea*.

Having given, in our late Directories for the Coasts of the BAY of BISCAY and PORTUGAL, the PHARONOLOGY or Description of LIGHT-TOWERS and other Land-marks, we hereto subjoin a continuation of the same, with VARIOUS INFORMATION acquired since the following part of the work was printed; commencing with CADIZ, and proceeding thence eastward to the EUXINE and LEVANTINE SEAS.

This

This ADDITIONAL INFORMATION, now constituting the first portion of the work, is arranged as follows:—

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IONIAN ISLANDS AND WESTERN GREECE.—Corfu, Paxo, and Santa Maura, page vii : Cephalonia, Zante, and Strophadia, viii : Previsa and Gulf of Arta, viii : Gulf of Patras, Description by Sir John Franklin, viii : Gulf of Lepanto, ix : Winds and Currents, x : Modon, xi.

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The PHARONOLOGY,

OR

DESCRIPTION of the LIGHT-TOWERS and other LAND-MARKS in the MEDITERRANEAN and BLACK SEAS.

With which is included INFORMATION ACQUIRED since the two parts
or volumes of the Directory were printed.

CADIZ.—The tower or lighthouse of St. Sebastian, on the west point of Cadiz, in latitude $36^{\circ} 31' 53''$, longitude $6^{\circ} 8' 10''$; a modern round tower, with three parallel rows of four brilliant lights, which make a revolution once in a minute, and so that the intervals of total darkness are of two seconds only. The lights, when full, may be clearly seen, in fine weather, more than six leagues off. (*For a view of Cadiz and its environs, see the Directory for Spain and Portugal.*)

TARIFA, the southernmost point of Spain, described in page 2, latitude $36^{\circ} 0' 50''$, longitude $5^{\circ} 36' 10''$ W.: a tower with *revolving* light, which, bearing E. by S. [*E. by N. true*] leads clear of the shoals lying on the same parallel to the west.

EUROPA POINT, GIBRALTAR.—On the 26th of April, 1838, the foundation-stone of a new lighthouse was laid on this point, with extraordinary solemnity, in the presence of about 10,000 persons. The inscription on a plate, deposited beneath the stone, is as follows:—

“ This foundation-stone of a light-house, erected by order of the colonial government of her Majesty VICTORIA, Queen of Great Britain and Ireland and their dependencies, in the first year of her reign, was laid on the 26th day of April, A.D. 1838, A.L. 5838, with military and masonic honors, by his Excellency Major-General Sir Alexander Woodford, K.C.B. &c. governor and commander-in-chief of the town and garrison of Gibraltar, assisted by the Rev. W. E. T. Burrow, D.D. F.R.S. Provincial Grand Master, for the protection of Mediterranean commerce, the saving of human life, and the honor of the British name.”

The *Victoria tower* will stand on a platform 38 feet square. The diameter of the column at the base will be 27 feet, and its height 60 feet. The building will be constructed entirely of hewn stone, and crowned with a lantern ten feet high, with a very powerful light. It will thus form a very handsome as well as useful object.

MONITION for VESSELS approaching GIBRALTAR from the EASTWARD; by Mr. Geo. Johnson.

“ As, in dark or thick weather it has been very common to mistake the rock of Gibraltar for the *Sierra Bullones* or Apes' Hill, Barbary, and *La Carbonera* for the rock, and vessels have thus readily become embayed, or run ashore in easterly or south-easterly winds on the shore of *Tiunara*, supposing it to be the entrance of the Strait; so, on the other hand, it has often happened that Apes' Hill has been mistaken for the rock, and the low banks to the southward of that ridge for the Strait, by which mistake vessels have been embayed in N.E. and East winds, and lost in the bay of Ceuta. All this has been proved fatally true by a great number of valuable ships lost, in the winter season, in the bay to the northward of Gibraltar and in that to the southward of Ceuta.

“ As an instance of the utility of a light on Europa Point it has been made known that H.M.S.V. *Beacon*, in March 1836, on her passage from Malta to Gibraltar and England, was detained by contrary winds off Cape de Gata, for several days, as was also a fleet of forty sail of merchant-vessels. On the 14th, the weather moderating, with variable winds, she was enabled to proceed to the westward; but the weather was so thick and hazy that the Spanish coast could scarcely be seen, although occasionally not more than from 5 to 8 miles distant. On the 16th it clearing a little, the town of *Estepona* was seen, bearing N. 33° W. *true*, 10 miles distant, and the rock of Gibraltar S. 63° W. *true*, 16 miles, and a current was found setting toward the Spanish shore at the rate of a mile and a quarter in the hour. At sun-set it became very hazy, and at 8 p.m. a gale commenced from the eastward, which enabled the vessel to round Europa Point, and to anchor in Gibraltar South Road.

"While the *Beacon* was lying here, a fine ship of Finland, one of the vessels that had been detained off Cape de Gata, ran on shore in the eastern bay, and became a total wreck. She had stood down in a greater offing from Cape de Gata, and not having been able to get observations for the two previous days, had also become set by the current toward the Spanish coast, and on the easterly gale springing up, (not having seen the rock,) had shaped a course in order to pass mid-channel, and ran on shore on the Spanish side of the neutral ground of Gibraltar, by supposing herself in the Strait. Several vessels, arriving about the same time, were nearly meeting a similar fate.

"Such cases generally occur in the night; but when the land is in sight, the light will be made out, Europa Point being generally clear when the highest point of the rock is capped with clouds.*

"**TARIFA LIGHT** is a preventive against the like accidents occurring to ships coming from the westward into the Strait, and instances of shipwreck in that quarter rarely happen."†

See further upon this subject, page 15.

It has been remarked, and we believe with strict propriety, that the **TIDE-TABLE**, which has been heretofore given on the charts of the Strait of Gibraltar, has been copied from a very old document; it is not to be depended on, and has often been found to mislead; the tide and current being frequently blended. (*See pages 9, 10.*)

MALAGA.—A light tower on the mole-head of Malaga, with excellent revolving light, seen at the distance of six leagues, as shown in page 17 hereafter.‡

CAPE DE GATA or DE GAT.—This cape is distinguished by the *Torre de la Testa* and other objects, described in page 22, which, as there shown, must be approached with caution, in order to avoid the effect of the variable currents setting among the rocks near shore.

It appears by a letter from Captain Nicholas, of H.M.S. *Belleisle*, dated 13th of August, 1840, that a dangerous sunken rock, mentioned by the old pilot Michelot, was seen at about a mile or a mile and a half from shore, S.W. by S. from the cape. Further particulars unknown.

Michelot says, to the S.W. by S. from the white spots on Cape de Gat, at about a little mile distance, lies a ridge of rocks, with very little water over them, but you may pass within the land and the danger, ranging along the point at discretion, at two or three cables' distance, or else keep out at about four miles in the offing, because some say there lies another danger about a league out to the S.W. by S.: there is likewise near the point of Cape de Gat, a rock almost level with the water, which you must not come near." See further Naut. Mag. Oct. 1840, p. 734.

COAST of MURCIA.—On approaching the coast between Alicante and Cape St. Martin, the high hill called *La Cuchillada de Roldan*, (the *Cut* or *Gash of Roldan*) is, from its superior elevation, an excellent mark for vessels approaching, as shown in page 29.

VALENCIA.—A harbour light, erected on the top of a quadrangular wooden pyramid, on the N.E. end of the mole, at 37 feet above the level of the sea, which may be seen, in clear weather, 12 miles off. The lantern is four feet in height, and the mirrors reflect the light of nine lamps, as shown in page 31. From this light the cluster of islets called the *Columbretes*, (surveyed by Captain Smyth,) bear E. by N. [*N.E. by E.*] 18 leagues, and from Cape Oropesa S.E. [*S. 65° E.*] 10 leagues. (*See page 32.*)

TARRAGONA.—A harbour light on the mole, at some distance within its extremity, and 30 feet above the level of the sea. The mole and light-house were nearly ruined by a gale in 1822, but we presume that they have been re-established. (*See page 35.*)

As a caution to those visiting *Tarragona*, it should be known that H.M. frigate *Tribune* was stranded in the harbour, on the 28th of November, 1839, in 3 feet of water. The ship had been

* But there are exceptions:—On advancing toward Gibraltar from the westward, at 8 a. m. 27th August, 1820, Captain Livingston says, "A thick fog came on; observing that it seemed to hang low, went aloft: and though we could see nothing from deck, I saw the top of Gibraltar Rock, the hills on the opposite side of the Bay, and Apes' Hill in Barbary, over the fog, and directed the vessel's course accordingly. When aloft I perceived a whitish coloured circle, about 20 yards in diameter, one side touching the vessel's larboard bow, and the other inclining upward at an angle of about 24 or 25 degrees. In the centre of the circle was the shadow of my own head, with a circle of prismatic colours surrounding it. At 4 p. m. moored in Gibraltar Bay."

† Mr. Geo. Johnson, master of the *Beacon*, Naut. Mag. Sept. 1836.

‡ "It may be useful to inform captains of vessels connected with the Malaga trade, that the depth of water has materially decreased since the discontinuance of the dredging work, which, till lately, was performed in that port by the government steam engine."—*Nautical Mag.* Nov. 1837.

lying snugly moored from the 8th of that month. On the 28th, at about 7, *p. m.* a gale sprang up from the S.S.W., which shifted afterward to the S.W. and W.S.W. Topmasts were struck, and every preparation made. At 9½ h. the small bower parted, and immediately afterward the sheet cable also. The sea had previously got up surprisingly, and washed the decks fore and aft. So soon as adrift, nothing could be done but to make sail on the ship and choose the best berth that could be found. She was accordingly forced through the heavy rollers, which kept constantly breaking over her till six o'clock the next morning, when she was found well up on the beach at the head of the harbour, just above the watering place, where there is usually so little water that the ships' boats had never been able to get there. This will impart an idea of the extraordinary quantity of water which must have been forced in by the gale. The ship ultimately, after a whole night of 'thumping,' lay in a bed of sand, which afforded the advantage of saving the stores, &c.—*Naut. Mag. Feb. 1840.*

BARCELONA.—A tower at 70 fathoms within the extremity of a new mole, and a quarter of a mile to the southward of the old lighthouse, shows an improved light at 60 feet above the level of the sea. Its situation with regard to *Monte Jui*, represented beneath, is shown in page 36. The summit of Monserrate, in a line with Barcelona, bearing N.N.W. ¼ W. [*N.W. ¼ W.*] is an excellent day-mark for the port, being 4170 feet high, above the level of the sea.



Monjui, bearing N. W. distant 4 miles.

In the middle of the entrance to the Port of Barcelona is a shoal, one cable's length broad, having only 6 to 9 feet of water, but in the passage on either side of it are from 15 to 24 feet. The harbour has been much improved by the construction of the new mole, as shown by the particular plan on the chart.

BALEARIC ISLES.—On these isles there do not appear to be any regular light-towers, excepting one on Majorca, with a fixed light upon a point of land two miles to the S.W. of the town of Palma, in the Bay of the same name. On the N.E. side of the same island a watch-tower marks each side of the entrance of the Bay of Alcudia; the tower on the north is that of *N. S. de la Victoria*, at a mile northward from Cape Minorca, and the tower on the south that of *San Moray*, a mile S.E. from Cape Farruch. (*See pages 46, 47, and 49.*)*

COASTS of FRANCE.

CAPE BEARN.—A fixed light on Mount Bearn, about 875 yards to the S.E. of the entrance of Port Vendres, in latitude 40° 30' 45", longitude 3° 7' 22" E. The light is of the first class, elevated 722 feet above the level of the sea, and may be seen at the distance of seven leagues. (*See page 58.*)

PORT VENDRES.—A fixed harbour-light on the fort, upon the right side of the entrance, lat. 42° 31' 25", long. 3° 6' 52" E. Elevation 108 feet; seen at three leagues.

PORT of NARBONNE.—(*Page 59.*) Fixed harbour-light of *LA NOUVELLE*, on the extremity of the western jetty, upon the left side of the entrance, lat. 43° 1' 0", long. 3° 3' 52". Elevation 36 feet; seen at 3 leagues.

FORT BRESCOU.—A fixed harbour-light on the S.E. bastion of the fort upon the islet of Brescou, at a league E.S.E. *true* from the mouth of the Herault; lat. 43° 15' 30", long. 3° 30' 7" E. Elevation 59 feet; seen at three leagues.

PORT of AGDE.—Harbour-light fixed, upon the extremity of the eastern jetty, on the right side of the entrance; lat. 43° 16' 45", long. 3° 26' 52" E. Elevation 29 feet: seen at 2½ leagues. (*Page 59.*)

MOUNT AGDE.—A tower and light of the first class, on the Mont d'Agde, or of St. Loup, 3½ miles N. 66½° E. *true* from the mouth of the Herault, lat. 43° 17' 50", long.

* It was announced, in January, 1834, that a Catalonian company had established a steam-boat to run once a week between Barcelona and the towns of Palma and Port Mahon, in Majorca and Minorca. The first vessel thus employed is, or was, *El Balear*, having the masts, with two engines of 50 horse power each, which enables her to make the trip over in about 16 hours.

3° 29' 37" E. The light is intermittent, showing a flash once in a minute, and the fainter light does not disappear, in ordinary weather, within the distance of three leagues. It is 413 feet above the level of the sea, and the flashes may be seen when nine leagues off.

CETTE.—(Pages 59, 60.) A tower on the Fort St. Louis, at the extremity of the mole, of the same name, on the left of the entrance into the port; lat. 43° 23' 45", long. 3° 42' 22" E. The light is *fixed*; 82 feet above the level of the sea, and visible at three leagues.

At 809 yards farther to the westward, and one above the other, are two lantern lights, on a sea-mark near the *Fort Richelieu*, seen at a league and a half, and which, in a line with that on the mole, lead in mid-channel of the N.E. passage into the harbour. These lights have been established since the year 1831, but the directions for entering, as given in page 60, should still be attended to.

AIGUES-MORTES.—(Page 60.) A tower on the mole N.W. of the *Grau du Roi*, at 558 feet from its extremity; lat. 43° 32', long. 4° 8', with light varied by a brilliant flash once in 4 minutes; elevated 59 feet, and seen at three leagues.

LA CAMARGUE.—(Page 61.) A provisional tower on the left shore of the mouth of the old Rhone, at two miles S.E. $\frac{1}{2}$ S. *true*, from the old tower of St. Genest; lat. 43° 20' 30", long. 4° 40' 52" E.: superseded by a new tower near the same spot, showing a brilliant fixed light to the distance of six leagues. To be lighted from Nov. 1, 1840.

PORT de BOUC.—Two fixed lights; the first upon the head of the mole, on the left of the entrance, at 52 feet; the other on the tower of the fort, to the right of the entrance, at 98 feet: both seen from the distance of three leagues. See page 62.

PORT of MARSEILLE.—(Page 63.) Two lights; the first a fixed light, at the foot of the tower of Fort St. Jean, to the left of the entrance of the port; lat. 43° 17' 45", long. 5° 21' 48" E., at the height of 30 feet. The second, an intermittent light, at 62 feet, on the point called the Tête de More, (or Moor's Head,) between the Cove de la Reserve and that of the Pharo, on the right of the entrance; lat. 43° 17' 43", long. 5° 21' 37" E. A flash every three minutes, seen at three leagues. In a S.E. direction the lights are masked by the mound of the tower. (First lighted July 15, 1837.)

The ISLET PLANIER, latitude 43° 11' 57", longitude 5° 14' E.,—eight miles to the S.W. of the port of Marseille; a tower of the first class, with intermittent light at 131 feet above the level of the sea. The flashes succeed each other every half minute, and are visible when seven leagues off. The eclipses are not total within a distance of three leagues.

CASSIS, described in page 65. A new harbour-light to be established at this port, from the 1st of November, 1840.

LA CIOTAT.—Harbour light, *fixed*, on the fort Bérourard, upon the east side of the entrance, in lat. 43° 10' 56", long. 5° 36' 50". Elevation 82 feet; seen at three leagues. Lighted from the 1st of November, 1840. (Page 65.)

PORQUEROLLE.—On the south point of this isle a tower of the first class, 52 feet high above the ground, and 262 feet above the sea: lat. 42° 59' 7", long. 6° 12' 37". The light, situate between Cape d'Arme and Cape Roux, is intermittent, and shows a flash once in every four minutes. Short eclipses, which precede and follow every flash, do not appear total within the distance of three leagues. The steady light, which intervenes between the eclipses, lasts about 2½ minutes. (Page 68.)

LEVANT, or TITAN LIGHT.—On the eastern extremity of the island, in latitude 43° 2' 30", and longitude 6° 30' 12" E.; a fixed light at 39 feet above the ground, and 246 feet above the level of the sea. Seen at 5 leagues off. (Page 68.)

CAPE LARDIER, in latitude 43° 11' 50", longitude 6° 41' 52" E.:—Page 69. A tower of the first class, 66 feet high, with intermittent light at 427 feet above the level of the sea. The flashes, in fine weather, may be seen when 8 or 9 leagues off, and the eclipses do not appear total within the distance of three leagues.

When at 6 or 7 leagues distant the appearance of this light may be distinguished from the intermittent light on Planier by its flashes having an interval of *one minute*, while the other has only half a minute, as noticed above.

It rarely happens that this light is seen by vessels advancing from the eastward before passing within sight of the Antibes light, which lies 30 miles to the N.E., or by those from the westward without previously seeing the Porquerolle or the Titan light, respectively at

25 and 13 miles distant. The old tower of Camaret stands on Cape Taillat, at three miles S. 27° W. *true*, from the lighthouse.

GAROUPE near ANTIBES.—(*Page 71.*) Since the 1st of July, 1837, a fixed light, of the first class, from a new tower on the peninsula of Garoupe, at a mile and a half to the southward of the port of Antibes, and near the chapel of *Notre Dame de la Garde*, in latitude 43° 33' 51" N. and longitude 7° 8' 6" E. The light is elevated 82 feet above the ground, and 332 feet above the level of the sea, and is visible, in fine weather, at the distance of seven leagues.

HARBOUR LIGHT of ANTIBES.—(*Page 71.*) On the extremity of the mole, to the left of the entrance, a tower with intermittent light, in latitude 43° 35' 10", longitude 7° 7' 53" E. One flash, of 4 to 5 seconds, appears every two minutes, preceded and followed by short eclipses. Elevation, 49 feet; range of light, nearly 3½ leagues.

On approaching Antibes from the eastward, mariners will see the fixed light of *Villa Franca*, which stands on Point Mala, (as will be presently noticed,) and also the intermittent light at the entrance of the port of Antibes, at the same time as they see the fixed light of La Garoupe: but the last mentioned light alone will be seen by those approaching from the southward or south-westward, until they have rounded the peninsula.

COASTS of ITALY.

VILLA FRANCA of VILLE FRANCHE.—(*Page 74.*) On Point Mala, upon the eastern side of the entrance to Villa Franca, an intermittent light, at 223 feet above the level of the sea, in latitude 43° 40', and longitude 7° 19' 30".* The flashes appear at intervals of half a minute, preceded and followed by short eclipses, and may be seen 20 miles off. (*See page 76.*)

GENOA.—(*Page 80.*) The Lighthouse of Genoa is an antient square white tower, in latitude 44° 24' 18", and longitude 8° 53' 15" E. It stands on a rocky point, named *San Benigno*, at about a cable's length to the west of the New or Western Mole, and by day exhibits signals to vessels approaching. The total height above the sea is 416 feet. The light is fixed; five large lamps with parabolic reflectors; and may, from its elevation, be seen afar off.

HARBOUR LIGHTS are also shown at the extremity of each mole.†

TINO, at the entrance of the GULF of SPEZIA, lat. 44° 1' 45", long. 9° 52' 30" E.—(*Page 84.*) A new fixed light, with the improved lenses, at 384 feet above the level of the sea, and seen, in clear weather, at the distance of 25 miles. (1838.)

LIVORNO or **LEGHORN**.—A lighthouse, represented in page 108, upon the extremity of a chain of rocks without the mole, and half a mile to the S.W. from the western extremity of the city walls, in lat. 43° 32' 30", long. 10° 17' 10" E. It shows a fixed light at about 170 feet above the sea.

The **MALORA TOWER**, on the southern part of the bank of the same name, (page 109,) is an excellent day mark on approaching the Roads of Leghorn. It is square, with an archway, and bears from the lighthouse W.N.W. four miles.

The **ISLE GORGONA** is another good mark for vessels bound to Leghorn, being elevated and having two towers upon it. From the lighthouse it bears W. ½ S. [*W.S.W.*] 18½ miles. (*See page 109.*)

ELBA.—(*Page 112.*) Upon the western side of the entrance to *Porto Ferraio*, on the north side of Elba, is a brilliant harbour light, which, from the elevation of the land, may be seen at a great distance. Lat. 42° 49' 10", long. 10° 19' 50" E.

CORSICA.—(*Page 87.*) Upon the extremity of the mole of **BASTIA**, on the right side

* *Not*, as given in the *Nautical Magazine*, Feb. 1839, 6° 24' 52".

† Quarantine Regulations.—The following is an extract of a letter received at Lloyd's from their agent at Genoa, dated Sept. 4, 1840:—

"We beg to subjoin the following official article:—

"The Board of Health of this city, in their sitting of the 3rd Inst., has decreed that vessels proceeding from Gibraltar are exempted from quarantine, provided they have not loaded any goods there; and if they had been imported from the empire of Morocco, can testify, with regular certificates of the Sardinian Consul, of such goods having remained in free circulation at Gibraltar during the space of 25 days."

of the entrance, in latitude $42^{\circ} 41' 48''$, longitude $9^{\circ} 27' 7''$ E., a harbour-light, fixed, at 52 feet above the level of the sea, and visible at three leagues off.

CIVITA VECCHIA, on the Roman territory, lat. $42^{\circ} 4' 40''$, long. $11^{\circ} 45'$ E.—(Page 116.) Lighthouse on the extremity of the New Mole, with fixed light at 82 feet above the sea; seen at $2\frac{1}{2}$ leagues.

RIVER TIBER, &c.—(Page 117.) A revolving light in the *Clementine tower*, which is square, on the north side of the mouth of the Tiber, in lat. $41^{\circ} 45' 30''$, and long. $12^{\circ} 11' 20''$ E. to mark the channel of *Fiumicino*. The light is successively shown and concealed for equal intervals, and may be distinctly seen to an extent of about four leagues. (See page 117.)

CAPE ANZO, lat. $41^{\circ} 27'$, long. $12^{\circ} 42'$ E. (Page 118,) has a light in a large square tower, similar to that of the *Fiumicino*, from which it is 28 miles distant. In the sector between these lights, and moderately clear weather, the dome of St. Peter's, at Rome, may be seen at a great distance off at sea; and while it can be seen it is the best mark for ascertaining the situation of a vessel in the vicinity. The dome bearing E. by N., by compass, leads directly to the mouth of the river.

BADINO.—(Page 118.) At about two leagues eastward from the extremity of *Monte Circello*, is the Badino tower, with revolving light, at the entrance of a canal cut through the Pontine Marshes; it is 65 feet high above the sea, and seen at two leagues off. Exclusive of the tower, two lanterns mark the entrance.

NAPLES.—Lighthouse in form of a slender and lofty tower, on the angle of the mole, in latitude $40^{\circ} 50' 12''$, longitude $14^{\circ} 15' 45''$, as represented in page 127, with a fixed light; also a lower light on the mole-head, to the S.W. These lights obviate the necessity of taking a pilot for the harbour, which may be entered with safety, but it is to be observed that a great swell sets in with south-westerly winds.

The following Remarks on the port of Naples were made on visiting this place, in the month of January, 1833, by Captain the *Hon. F. W. Grey*, of H.M. frigate *Actæon*.

"The anchorage in the Bay of Naples at this season, being very much exposed, it was an object of importance to get the ship into the mole; and it may, perhaps, be useful to mention that the permission for this purpose is obtained by the Consul, and that, on his application to the Minister of Marine, every assistance is afforded by the dock-yard. A lump was sent to us early on the following morning, to convey our powder to a magazine at Posilipo; hawsers were laid out in readiness, and the master of a corvette sent to take the ship in. We let go our anchor at the entrance, and hauled in, mooring with a stream cable, for a bow-fast, and two bower cables of a Neapolitan frigate for quarter-fasts. It was necessary to make an application for permission to use these cables, which are much preferable to laying an anchor out for the larboard quarter-fast, as, from the number of cables and anchors about, it would be very difficult to lay it clear. The stern moorings are of the most consequence, as the heaviest breezes come from the S.E. and S.W., and having good scope of cable on the bower anchor, a ship is well secured to the northward.

"Water we obtained from a tank vessel belonging to the dock-yard; and I cannot speak too highly of the readiness with which all our requests were granted, and our wants supplied, by the intendant of the arsenal.

"The water at the entrance of the mole is very shoal, the deepest being 24 feet, close to the mole-end; the bottom is soft mud, and although we took the ground with our heel in going in, we had no difficulty in hauling clear. We remained in the mole till the 26th of March. The weather during the time, upon the whole, was fine, with occasional gales of wind from the westward. The prevailing winds were westerly and south-westerly, the latter generally accompanied with rain.

Anchorage in the Bay.—"On the 26th we hauled out of the mole, and on the 27th received Prince Charles on board, and ran over to Sorrento, returning the same evening to our anchorage off the town. In the Bay our anchorages were as follow.

"*First*, in 12 fathoms, the Mole lighthouse, N.W. $\frac{1}{2}$ N. and Castle del Ovo (point) W.S.W. $\frac{1}{2}$ W.; *Second*, in 11 fathoms, Mole lighthouse, N.W. $\frac{1}{2}$ N.; and Point del Ovo S.W. by W. $\frac{3}{4}$ W.; *Third*, in 13 fathoms, Mole lighthouse North; Point del Ovo W.S.W. $\frac{1}{2}$ W.; St. Elmo, N.W. $\frac{1}{2}$ W.

"These are all good berths; the best, I think, are with Point del Ovo from W.S.W. $\frac{1}{2}$ W. to W.S.W., and the Mole lighthouse from North to N.W., in 12 to 14 fathoms. You should not bring Point del Ovo so far to the westward as W. by S., as you would then run the risk of dropping your anchor upon some wrecks which lie between the following bearings, in from 18 to 25 fathoms:—Lighthouse W. $\frac{1}{2}$ N. to N.W. $\frac{1}{2}$ W.; Point del Ovo W. by N. to W. by S.

"We remained at our anchorage till the 6th of April; on the 2nd we had a very heavy gale from

from the southward, which threw a heavy sea into the bay, but the ship rode very easily.”—*Nautical Magazine*, Sept. 1834.

The coast on the eastern side of the Bay of Naples is distinguished by several towers, as the *Torre Recina*, *Torre del Greco*, *Torre de Annunziata*, &c., and there are guard-houses on the Capes Sorrento and Massa, amid some of the finest scenery in the world.

ISLAND OF SICILY.—On Sicily are lighthouses at *Trapani*, *Palermo*, *Milazzo*, the Faro and Port of *Messina*, *Augusta*, *Syracuse*, and *Girgenti*; but even at Palermo the light is very defective, at noticed in page 146, as well as those of the Faro Point and Harbour of Messina, as shown in pages 152, 153.

The *Colombara Light-tower*, which distinguishes the western side of the Port of Trapani, is noticed in pages 162 and 165. At *Girgenti* are two light-towers, useful chiefly as day-marks. (*Pages* 170, 1.) The lower light of Messina, between the high light and Fort S. Salvador is described in page 155.

The remarkable *sub-aqueous volcano*, of 1831, described in pages 169 and xvi. disappeared in January, 1832, while there then existed a vast column of boiling water, rising from 10 to 30 feet above the surface of the sea. By the close of January, 1832, the islet had sunk some feet below the water, and it has since entirely disappeared, without, it is believed, leaving even a shoal on the spot, although smoke from the sea has since been observed in the vicinity of 60 and 80 fathoms of water.

EMPRESS SHOAL, near CAPE PASSARO.—(*Page* 174.) On the 17th of June, 1837, the brig *Empress*, of Sunderland, from Catania to England, grounded on a shoal about 3½ miles from the extremity of *Current Island*, which bore from the ship E. by S. (by compass). The spot where the ship struck appears to be the shoalest part of the bank, whereon was 13 feet of water. Its extent is small; and, from the vessel's having reached from the land two or three miles before she came to the ground, and being ultimately got off by being hove toward the shore, it cannot be the continuation of a shoal from the main land. After remaining aground 17 hours, the vessel was, by discharging part of the cargo, (sulphur,) got off without sustaining any material injury.

MALTA.—(*Page* 181.) At the entrance of the port of Valetta, a round tower, presenting an improved and brilliant light, which may be seen more than eight leagues off. A view of the point is given on the new chart.

The S.E. COAST of ITALY and GULF of VENICE.

The S.E. coast of Italy is deficient in light-houses; but there is one on *Cape Rizzuto*, in latitude 38° 56'; watch towers on Cape Nau, Taranto, and other points, and a harbour-light on the islet Andrea, near Gallipoli, on the eastern side of the Gulf of Taranto. (*Vol.* ii. *page* 2.)

GULF of VENICE.—On the shores of this Gulf there are few lights, but many day-marks, by which the points may be distinguished. *BARLETTA* (lat. 41° 19½') has a small harbour-light, as shown in page 4,* and a telegraph.

There are Harbour Lights at *Ancona*, in latitude 43° 38', described in page 5; also at Sinigaglia, Fano, Pesaro, Rimini, Cesenatico, Cervia, and Port Corsini, near Ravenna. The last serves as a day-signal, indicating the entrance of the river.

GULF of TRIESTE.—On the mole-head of TRIESTE stands the handsome round tower described in page 14. The cone of light, at 106 feet above the sea, and seen at the distance of four leagues, is eclipsed by a revolving shade twice in a minute.

POINT SALVORÉ:—a stone tower, lighted with gas, in form of a brilliant cone, having three horizontal circles of light, at 116 feet above the sea, and may be seen from the distance of seven leagues. (*See* page 11.)

There is a deficiency of Lights on the Eastern coasts of the Adriatic, but the isle Pomo, noticed in pages 6 and 23, stands like a beacon in the sea, and is alike useful, in the daytime, to vessels both on the east and west.

* It is to be observed that all the references to places in the Adriatic Sea, the Grecian Islands, and all the coasts to the eastward, are to the *second* volume of this work.

DURAZZO BAY (Page 21). On the 26th of October, 1839, H. M. S. *Talbot*, in coming out of this bay passed over a mud bank, which lies in the very centre of it, but fortunately did not receive the least injury, there being 15 feet of water over the shoal.

IONIAN ISLANDS.

[Vol. ii. pages xxiii., xxiv., and 30 to 46.]

Lighthouses have been established by the Ionian Government on different points of these islands.

At **CORFU**, on the rock *Tignoso*, at the entrance of the North Channel, as noticed in page 32, and described in page 34: another on the old citadel of Corfu, page 34; and a floating light in the South channel off Point Alefkimo. A buoy now marks the shoal stretching from Cape Bianco, the South point of the island. (Page xxiii.)

On the *N.W. Cape of Paxo* is the Lighthouse described in the note 4, page xxiii.: and on the S.E. of that island is the Light at the entrance of the little port of *Gayo*; page xxiv.

At *Santa Maura*, on the mole-head of the Harbour, a round tower with light, as described in page xxiv.

At *Cephalonia*, a lofty round tower on the islet Guadiani, off the West side of the entrance of the harbour; and a harbour-light on the Point Teodoro, near Argostoli, within on the eastern side, and leading into the Harbour. (Page xxiv.)

Zante.—A low quadrangular building on Point Krio-neri, (page 44) with improved fixed light, as shown in page xxiv. A small light on the mole-head, (page xxiv.,) and another on Cape Kieri, the South point of the island.

Strophadia or Stamphané Isles.—An erection on the Convent isle, showing a light to the distance of $4\frac{1}{2}$ leagues. Pages xxiv. and 47.

In a communication made by Capt. J. R. Dacres, dated H. M. S. *Edinburgh*, August, 1835, this gentleman gives a more correct description of the Strophadia as follows:—The southern point is low and apparently sandy; the highest part is about 50 feet above the level of the sea. The extent of both isles, from North to South, is about five miles.

The Lighthouse stands on the highest part, and nearly in the centre of the large island. A little to the northward of it is the convent, with a round tower and a flagstaff on it.

The northern island is considerably the lowest, and terminates in a low sandy bluff point."

PREVISA.—(Page 38.) From "Observations on the Gulf of Arta," by Lieut. James Wolfe, R.N. 1830.

The entrance of the Gulf is narrow. Between a bastion of the walls of Previsa and the opposite low point on which stands fort La Punta, it is only 700 yards across; outside of this is a bar, composed of gravel, coarse sand, and sea-weed, not having more than 15 feet of water on it in the shoalest part of the channel. The northern shore has an elevation of about 60 feet, is moderately level and covered with olive woods, while to the southward the land would appear, from its barrenness, flatness, and the swampy and saline nature of its soil, to have been gained from the sea.

The entrance lies about *N.N.E. true*; then turning abruptly round a low point, on which is a small redoubt of earth, it continues in a southeasterly direction of greater width about four miles; this may be termed the Bay of Previsa. Between Capes La Scara and Madonna, which are high and form a sort of second entrance to the gulf, the width decreases to one mile and a half, and then expands into a large basin, of which the southern and eastern shores are high and bold; the northern low and swampy, with large lakes, separated from the gulf only by narrow ribbons of sand, occasionally dipping below the surface, and not rising to more than 18 to 24 inches above.

The town is abundantly supplied with water by springs, and possesses every requisite for emerging from its miserable condition. The market is but indifferently supplied with vegetables and fruit, the vicinity being devoted to the culture of the olive, which is the chief produce of the country, though valonia, bullocks, fire-wood, and occasionally corn, find a market at the Ionian Islands. The European consuls for Albania generally reside at Previsa.—*Journal of the R. Geographical Soc.*, Vol. iii., p. 77, with map.

GULF of PATRAS.—(Pages 48, 49.) Patras was visited by H. M. S. *Rainbow*, Captain Sir

Sir John Franklin, in December, 1832, and it was found that the snow remained stationary on the tops of the mountains after December began, and it occasionally descended as low as the lesser hills behind Patras, but at that time seldom remained in these places longer than a few days. When snow fell in any quantity on the hills they had small rain at the anchorage, with very raw cold weather; the thermometer being occasionally as low as 36° in the warmest part of the day. The N.E. winds prevailed also in this month, and often blew very strong. Once only, on the 5th of December, a gale from the S.W. was felt at the anchorage, and this came in a very violent gust, like a whirlwind, by which two water spouts were raised. Heavy lowering clouds, vivid lightning, and peals of thunder, preceded, and gave such timely warning of the change, that any ship might have shortened sail.

The weather was, in general, fine during the months of January and February, but often very cold, the thermometer falling occasionally as low as 30° , at which time not only the mountains but the lesser hills were covered with snow. The N.E. winds were frequent, and often blew with violence along the Roumelian shore, while on the Patras side they came only as fresh breezes, to which double reefed topsails and top-gallant sails might have been carried. In the month of March the weather was more unsettled and the winds were variable; after the middle of the month there were strong breezes from the S.W. for three successive days.

The North side of the Gulf, opposite to Patras, is called by the Greeks the Bay of *Krio-nera*. Here the Turkish fleet formerly anchored, near the base of a high peaked mountain, *Palæo Vouna*; and here, at three quarters of a mile from shore, the *Rainbow* found only 5 fathoms of water, and then anchored in $4\frac{1}{2}$ at about half a mile from shore, with the extremity of a sandy spot that forms one point of the bay S.W. by W.; the steep and bluff Cape of *Palæo Vouna*, that forms the other point of the bay, E. $\frac{1}{4}$ S.; Castle of Patras, S.E. $\frac{1}{4}$ S.; Cape *Papas* W.S.W. In this situation there were only $3\frac{1}{2}$ fathoms at a hawser's length astern, or in-shore of the ship; and when they had veered to 72 fathoms on the best bower, in consequence of a violent gale coming on from the east, there were $3\frac{1}{2}$ fathoms on each side and astern, and four under the bow, with space to veer to 50 fathoms more cable before they could reach the ship's draught of water, 16 feet. The gale sent in a very heavy swell, which prevented the ship being cast to seaward, and compelled her to remain at her anchors, the small bower having been also let go. The gusts rushed down the mountain like a hurricane the whole of the night, bringing with them great quantities of sand, and even gravel; and it was every moment feared that the ship must have been driven from her anchors, in which case her destruction would probably have followed. The wind became moderate in the morning, and they were fortunately enabled to cast the ship to seaward and stand over to Patras, where it was found that the gale had been equally violent on that side of the gulf, that three vessels had been driven out to sea, and several houses blown down.

Captain Franklin adds, "Though the ground in Krio-Nere Bay is excellent for holding, I should not at all recommend any ship anchoring there, as they would, most probably, be caught in the strong N.E. winds. Nor is it advisable, on this account, for ships to anchor on any part of that coast between Messolongi and the Castle of Roumeli."

At this time the Morea Castle, a very strong fort, was in good repair: there were 13 guns mounted on it, fronting the sea, or that could, at different angles, bear on a ship. The Roumeli castle, very much out of repair, had three guns facing the sea. The only apparent danger in the strait, between the castles and Vostitza, is a very dangerous spit extending from Point Drepano, on the south shore, nearly opposite to Lepanto. This must be carefully avoided; which may be done by keeping in mid-channel or nearer to Lepanto.

Just to the eastward of Lepanto is a sandy spot and a line of low shore which must not be approached too closely. In beating up or down, a ship should not stand nearer to this long low point than in 14 fathoms, as the water shoalens suddenly; but a ship will be well clear of this shore by keeping mid-channel or by using the lead carefully when standing toward it.

Above Drepano the shore is bold all the way to Vostitza, and may be approached without fear. There are two or three bays in this part of the coast, formed by projecting gravelly points, but the water in all of them is deep; and it is doubtful whether they could, with safety, be used as an anchorage, except as stopping places in a S.W. gale.

GULF OF LEPANTO.—VOSTITZA (Page 49.) The Bay of Vostitza is open to the northward, and formed by two projecting points about two miles apart. The water here is very deep; the first soundings gained will be about 30 fathoms, at three-quarters of a mile from shore, and the best anchorage for a ship is in 17 fathoms, about 500 yards from the western shore and 500 yards from the custom-house on the beach at the head of the bay. A ship moored in this situation will ride in safety, as the ground is very tenacious mud, and the winds, though they blow most violently at times from the N.E. and S.W. on the outside, scarcely ever reach home, nor send in a swell sufficient to hurt a ship. S.W. winds produce the greatest swell, hence it is advisable to anchor nearer to that side of the bay than in the centre of it. In 19 fathoms, the bearings were, the N.W. point of the bay N. 27° W.; East point of the same N. 82° E.; the noted plane tree S. 11° E. Here the ship rode out heavy N.E. and S.W. gales without experiencing

experiencing inconvenience. In weighing anchor a purchase was required. Latitude of the commandant's house by the great plane tree, $38^{\circ} 15' 18''$; longitude E. $22^{\circ} 11' 40''$.*

The town is well supplied with excellent water, the principal fountain being close to the plane tree. Fresh provision may be obtained. The town, having no fortress, is small and straggling, built on the hill above the beach; it contains three or four good houses. The store-houses of the merchants and the custom-house are on the beach; and merchant ships lie close to the wharfs. This place is the great depôt for the shipment of currants in the Gulf of Lepanto, and those not grown in the vicinity are brought hither in small Greek boats. The English merchants are almost the only purchasers of this fruit, though a small part is sent to Trieste in Austrian and Greek vessels. The quantity purchased by the English merchants in 1832 was sufficient to load 12 or 13 vessels, averaging 150 tons, all of which were sent to London. The duty on the export, in the same year, amounted to £98,000.

Sir John Franklin has described the set of the Current, as well as the rise and fall of the water, in the Gulf of Lepanto, which, he says, depends on the direction and force of the winds, current running most strongly when the wind blows down the Gulf. At Vostitza it was found that a strong S.W. wind brought in such a body of water as to cause a rise on the beach of two or three feet, and that a gale from the N.E. caused a considerable falling of the water, but not quite equal to the rise produced in the contrary direction.

The Currents in the Gulf of Patras, particularly toward the head of it, near the town, are likewise governed by the wind, and follow its direction; but, after a N.E. wind has blown with violence for some hours, and the body of water it has brought down the Gulf of Lepanto has been thrown on the steep shores of the S.W. side of this gulf, a re-action in the water generally takes place, and the current returns against the wind to the N.E. Similar effects are produced by a continuance of strong breezes from the N.W. and S.W.; the water is carried rapidly at its commencement to the N.E., and forced into the Gulf of Lepanto till a re-action takes place, and then the current returns to the S.W. or westward, against the wind. In calm weather it was remarked that the drain of the water at the anchorage before Patras was more frequently to the N.E. than otherwise, though it has often been observed running to the S.W. and S.E. The Greek boatmen say that, in moderate weather the current is, in general, still about noon, and again from 7 to 8 p.m., which was occasionally confirmed, but not so generally as to induce the supposition that the current partakes of the nature of a tide, which its regularity of ceasing to run at those times would imply.

The boatmen likewise say that the current almost constantly runs to the westward from Point Bakari,† or downward along the shore in front of Messolonghi as far as the isle Oxia, a distance of more than six leagues; and that the current takes a contrary direction, with almost equal uniformity, along the S.W. side of the gulf. They recommend that, in these seasons, ships in beating up the gulf should keep nearer to the S.W. shore after they have gotten well round and above the reef that extends from Cape Papas, the N.W. point of the gulf; and that, in beating out of the gulf, they should work on the Messolonghi shore.

Between the months of April and September it was observed that, however strong the wind may have blown during the day, it almost constantly abated at sun-set, and that the wind had blown from the land during the night; on this account the boatmen and small vessels almost invariably leave Patras in the evening on going to Zante or any of the islands.

"During the month of October the winds were blowing almost constantly down the Gulf of Lepanto, and generally with much force during the day, though they became moderate in the night. These N.E. winds came down very strong in November, though we have heard that the winds on the outside, which were blowing at the time from S.E. and S.W., being turned from these directions by the mountains that are near the gulf in the Morea. Contrary to the course in the preceding month, these winds did not abate during the night, but appeared to blow with nearly the same force down the gulf, and along the north shore of the Gulf of Patras; though at the anchorage before Patras it was generally either a moderate breeze or calm during the night, with occasional squalls of short duration. While these winds continued, no vessels could have beaten into the gulf: even the small trading-boats were detained at its entrance many days. The current was running so strong to windward the whole of this time at the anchorage before Patras, that the ship seldom rode head to wind even in very strong squalls. The meeting of the current and wind caused the whole of the north side of the gulf below the forts to be in a foam, and also a considerable swell at the anchorage before Patras. The reason of this strong current we suppose to be—that the wind in the offing had been blowing strong from S.W., and prevented the escape of the water from being carried down this gulf by the N.E. gales.‡

* Not $22^{\circ} 4' 40''$, as given in the 'Nautical Magazine,' to which we owe these extracts.

† The point about 5 miles to the S.E. of Messolonghi.

‡ For the interior of the Gulf of Lepanto to the Bay of Corinth, see vol. ii., pp. 49—51.

MODON.—(*Page 54.*) Upon the western or castle point of the entrance to Modon a lighthouse is marked on the charts, but whether it has been lighted since the late hostilities we have not been informed, and suppose that it has been discontinued.

CANDIA.—The damage caused by the stormy weather of December, 1833, to the port of CANEA, described in the note, vol. ii. page xxiv. has been thoroughly remedied by order of Mehemet Ali. It now has a fine mole, 1200 feet long, capable of admitting a great number of vessels, and of larger burthen than is generally supposed; having convenient accommodation for vessels of from 200 to 300 tons, in $4\frac{1}{2}$ to 5 fathoms of water, good ground. For such vessels it has therefore become an important harbour. The description in vol. ii, page 67, should be corrected accordingly. (*Captain Spurgeon, Harlequin of Yarmouth, 1836.*)

A tower on the mole-head, established in 1839, exhibits a light at 85 feet above the sea, which may be seen when 12 miles off. (See the plan of the port on the New Chart of the Mediterranean Sea.) Of the ports of Candia that of Canea is the most frequented.

The scenery around the Bay of Canea is very beautiful. In a S.E. direction is a row of mountains, and at the foot of these is the town. Large ships lie outside the harbour, and are much exposed to northerly winds.*

SUDA.—The harbour of SUDA, (*page 68*) has been recommended as one of the best anchorages in Candia, and for refitting and obtaining supplies.

CAPE SIDERO, the N.E. extremity of Candia.—According to a journal of the bark *Union*, in 1838, there appears to be a reef of rocks, between the Yanissary Isles and the western extremity of Cape Sidero, extending a quarter of a mile N.E. and S.W.; some of them above water. The original notice of them is singularly erroneous; but so near as we can conjecture they lie with the north end of the larger Yanissary N.W. $\frac{1}{2}$ W., $2\frac{1}{2}$ miles, and the western extremity of Cape Sidero S.E. by S. about one mile. The water much discoloured about a cable's length, in a N.E. direction.

EASTERN GREECE.—HYDRA and SPETZIA.—(*Page 75.*) The channels and rocks about Hydra and Spetzia have, as yet, been imperfectly represented in the charts, from want of regular surveys: it appears that there are three rocks, of 3, 12, and 18, feet of water, among the Strato-nesia, near Hydra, and two of 21 and 23 feet between Trikeria and Spetzia, not shown in the charts, but all of which are so steep-to that the lead, on approaching, is useless.

The currents hereabout are strong and uncertain. H.M.S. *Rainbow*, in 1832, when nearly midway between the point of Castri and the island Hydrion, in the course of half an hour, was driven eastward by the current, in a calm, so close to Hydrion, that she was prevented from being forced on shore only by the boats towing her head round. The depth of water was 25 fathoms, and 35 at less than a cable's length from the shore.

PORT of ATHENS.—(*Page 82.*) Sir John Franklin, in H.M.S. *Rainbow*, anchored in the Piræus for one night, in the summer of 1832; and he describes the entrance to this place, as known by a pile of stones on the south point; you may haul round this at three cables' distance, into the outer harbour, where there is anchorage in fine weather; but it is exposed to west winds, and the ground is said to be foul. A ship would have but little room to cast, even in mid-channel, if the wind set in strong. After the point above mentioned, on which the pile of stone stands, and two other points have been rounded, the houses of the Piræus open to view, as well as the collection of stones, or remains of pillars, on which the figures of lions formerly stood, and between which a ship must pass, in order to enter the Piræus. Before you reach these pillars, you will see a heap of stones, about 4 feet high, near the starboard shore, which must be left on the right hand on going in. The stones stand about 130 yards to the west of the southern pillar, and may be approached to the distance of 20 yards.

"The course must be nicely shaped from these stones, so as to steer exactly between the pillars of the lions, which lie nearly north and south from each other, and are only 35 fathoms apart. This breadth is reduced to 30 fathoms, or 180 feet, for a ship, in consequence of there being about three fathoms projection of the base of the rock from each pillar, over which there is not more than 15 feet of water.

"Having passed through this channel, the Piræus opens into a nearly circular basin, in

* A beautiful view of the port, with the peaked mountains to the southward, is given in the *Nautical Magazine* of October, 1838.

many parts of which there is sufficient water for any ship to anchor. One of our 74 gun ships has anchored in it. We anchored about 250 yards within the *Narrows*, and immediately opposite the centre of it, in $8\frac{1}{2}$ fathoms; but the best berth is about three cables' length to the S.E. of our anchorage, nearer to the hill on the S.E. side than the middle of the port, where there is 7 or 8 fathoms of water. There you would have room to veer, if necessary, to any extent of cable, and also to cast the ship with the land breeze, if you should think it proper to go out under sail. But this mode is seldom recommended to be taken, on account of the probability of the wind proving variable before you have passed the pillars of the lions and beyond the heap of stones to the westward of them. It is more advisable to wait for a calm, either to warp or tow out, as we did.

"Our soundings in going in, through the outer harbour, were $15\frac{1}{2}$, 16, $15\frac{1}{2}$, $14\frac{1}{2}$, $14\frac{1}{2}$, $14\frac{1}{2}$, $14\frac{1}{2}$, $13\frac{1}{2}$, $12\frac{1}{2}$, $10\frac{1}{2}$, 12, $11\frac{1}{2}$, $4\frac{1}{2}$, and $4\frac{1}{2}$; the least water being about 12 fathoms distant from the outer heap of stones; then $6\frac{1}{2}$, 10, $12\frac{1}{2}$, 12, 12, $10\frac{1}{2}$, $9\frac{1}{2}$, $8\frac{1}{2}$, and $8\frac{1}{2}$, up to the *Narrows*, and within the pillars of the lions, sufficient water was found, as far as the middle of the basin, and on the S.E. shore, for any ship. The water is even deep at the distance of 5 or 6 fathoms on either side of the walls that connect the pillars of the lions with the shore.

"It is shallow near the town and on the north side of the port. The Piræus may be considered an excellent harbour to refit a ship in: all the dangers of entering seem to be apparent, and the only cause for anxiety is its narrow entrance. Once within the walls, no sea can reach, that would either hurt the ship or stop the operations. The bearings from the Rainbow's anchorage were, the North lion rock N. 87° W.; South lion rock S. 79° W.; Southern extremity of Salamis, N. 85° E.; Anter Rock or Themistocles' tomb, S. 85° W.; Acropolis, of Athens, N. 80° E.; highest part of Mount Hymettus, S. 81° E." — *Nautical Mag. Feb. 1835.*

The situation of a Lighthouse, as marked on the charts, is on the starboard or south side, rather more than a cable's length without the heads of the antient piers, or pedestals of the lions. This is expected to be restored, and lighted on the improved principle, so soon as the government has sense and spirit to effect it.

ZEÀ, PORT OF.—(Page 90.) It appears that this port, on the N.W. side of the island, shows a light, of which we possess no particular description; but there are reasons for expecting that, at a future period, it will be improved.

SANTORIN, &c.—(Page 94.) It has been stated in the public papers, that, on the 1st of April, 1837, an earthquake had made sad ravages in four of the Greek Islands,—Hydra, Spetzia, Poros, and Santorin. The shocks were repeated at intervals during a week. The little town of Santorin was swallowed up by the sea, and all its inhabitants perished.

The progressive rise of a sunken rock, in the volcanic bay of Santorin, seems to indicate the base of a new islet, and the soundings between Santorin and Therasia have so far diminished that, from a depth equal to that of the surrounding sea, they have been reduced to 15 or 20 fathoms, and since to 4 and 2 only.

In 1830 the depths were taken by M. M. Bory and Virlet, in order to determine the form and extent of the mass of rock, which, in less than a year had been elevated half a fathom. It was found to extend 874 yards from east to west, and 546 from north to south. The sub-marine surface augmented to the north and to the west, from 4 to 29 fathoms, while to the east and south the increase amounted to 45. Beyond this limit the soundings indicated, in all directions, a very great depth.

Admiral Lalande, twice at Santorin since 1830, ascertained that the rock continued to increase. In September, 1835, the date of his last visit, the depth of water amounted to only two fathoms, so that a sunken reef now exists which is dangerous for brigs to approach. If the rock continues to rise at the same rate, it may be calculated that, in a few years, it will form an islet. Since the eruptions of 1707 and 1712, which produced the Kaimeni, the volcano appears to be extinct; but the rise of a portion of the surface seems to demonstrate continual effort to make an eruption during the past 50 years; and that whenever the resistance shall not be strong enough to offer a sufficient obstacle, the volcano may again resume its activity.

SYRA.—(Page 106.) On the north side of Gadaronisi, eastward of Syra, is a small tower, with a fixed light, very useful to vessels passing between Tino and Myconi, toward the Strait of Scio.

ARCHI-

ARCHIPELAGO, IN GENERAL.—Be it observed, as a general rule in the Archipelago, that it is always safe to anchor under the lee of an island or any land with northerly winds, as they never shift suddenly to the southward, but gradually die away and allow time for a vessel to get up her anchor. But it is never safe to anchor under the lee of an island or any land with *southerly winds*, because they generally shift to the northward in a heavy squall. —(*Mr. R. Easto.*)

TINOS and NICARIA.—(Vol. ii. pages 110 and 118.) The remarks of Mr. Wood and Captain Stewart, on the gusts from Tinos, page 110, were verified by Sir John Franklin, in 1832. On the passage between Tinos and Myconi, soundings were gained, in 44 and 45 fathoms, about three-quarters of a mile from a craggy point of Tinos, near the eastern outlet of the channel. Just as the *Rainbow* had escaped from the channel, there was a heavy squall from the high land of Tinos, though calms and light airs had prevailed for several hours before. The captain, therefore, observed that, "We can from experience join in the caution of either not carrying lofty sail when near its shore, or being always ready to take it in at an instant."

The ship experienced a strong southerly current and swell in crossing over to the eastward, which carried her much nearer to the shores of Nicaria than the course steered led her commander to expect. Having passed the N.W. end of that island the wind fell entirely, when the ship was seven or eight miles from the shore. She was driving toward it, under the influence of the swell and current, when the breeze came from the N.W. which enabled her to make sail to the N.E.—It therefore seems adviseable at all times to give Nicaria a berth of several leagues."

ISLAND and GULF of SYMI.—(Page 113.) The island and Gulf of Symi have, until recently, been very erroneously described; but a '*Sketch*' of both, by Jas. Brooke, Esq. given in the Journal of the R. Geographical Society, of 1838, has been essentially useful in correcting such misrepresentation.

The **ISLAND** lies about 18 miles to the N.W. of the northern point of Rhodes, and directly in the track of vessels bound along the coast. At its S.W. angle is the Harbour of *Paneri-miotis*: a deep bay encloses the mouth of the port, which is narrow and formed by natural piers, facing the N.W.

SYMI, the only town on the island, is a thriving place, situate on an acclivity above the *Scala* or landing place in the bottom of the bay at the N.E. (*not S.W.*) angle of the island, and facing the Gulf of Symi, which from the centre of the bay bears E.N.E. The harbour is long and narrow, with deep water, and vessels lie close in, with a fast to the shore.

There is, also, a harbour, called *Nimborio*, to the northward of the *Scala*, and divided from it by a rocky ridge.

"Symi is a high rocky and barren island of grey limestone, rising about 1000 feet above the sea, its general outline irregular, and its coasts bold and steep. Deep indentations mark both the northern and southern extremities of the island. The soil is extremely unproductive, but the inhabitants cultivate every available patch of ground between the rocks with great assiduity. Commerce and enterprise have rendered this unpromising spot a thriving mart. It is a dépôt for sponge and wood. The former article is found in the neighbouring seas, and employs the male population during the summer to procure it. France is the great outlet for the coarser, and England for the finer, kind of this article, but some of it is carried direct to its destination. Greek boats come from Rhodes, Greece, Smyrna, &c., to convey the sponge previous to its shipment in European vessels. This intermediate carrying trade is useful and lucrative to the boatmen of Symi in particular, and generally to those of the whole coast and islands. The second export, wood, is collected in the Gulf of Symi, and along the coast to the eastward toward Marmorice and Makry, and exported from the island even as far as Alexandria, whence ships come for their cargoes. The possession of three harbours affords Symi these resources, and it is pleasing to observe the active use they make of these natural advantages." The island is included in the Pashalik of Rhodes: its population about 7000 persons, who are slightly taxed.

Off the southern extremity of Symi is the isle *Kiskilies*, a picturesque and fertile spot, about a mile or more in extent. On its S.E. side is a detached cluster of rocks and an islet near them. To the westward is likewise an islet, with a narrow but deep passage between it and the larger isles. A passage of a mile or more divides Kiskilies from Symi; it is deep and clear from danger, but the wind is not to be trusted, on account of the high land.

In order to make the western harbour, PANERI-MIOTIS, when coming from the southward, after rounding Kiskilies, it will easily be discerned from its depth, and the right shore may be kept on board until the harbour's mouth opens. The best leading marks into the port, however, are the four islets which extend outward from the westernmost point of Symi. From the outer one of these islets the compass course E. by S. will conduct to the harbour's mouth. The headland on the left hand, on going in, which forms the western extremity of the bay, is bold and projecting, but a rock or shoal is reported to lie off it; and it will, therefore, be advisable to give it a berth on coming from the northward and westward.

The harbour's mouth is about 200 yards wide, and deep within a short distance of either shore. The soundings just within the entrance are 6 fathoms, then 5, 4, and 3. The harbour has 3 and 43 fathoms all over it;—is oval in shape, and secure from all winds, but the holding ground is not very good. Its breadth is about half a mile, and it forms a convenient shelter for small vessels. At the bottom of the bay is the monastery of Panerimiotis, inhabited by a few Greek monks, who are very civil and obliging: but wood, water, and provisions, in general, must be brought from the town of Symi in boats, as the *Kaloyeri*, or monks, are the only inhabitants, and the road to the town is over steep and rugged mountains.

In order to make the harbour of SYMI, on the N.E. of the island, upon coming from the northward, round the headland, with a small islet off it, and steer S.W. ½ S. (by compass) for the anchorage. On approaching from the southward round the Windmill hill, which forms the south-eastern point of the bay, and keeping the southern shore on board, steer directly for the Scala. On coming from the southward, however, the town of Symi will be seen on the hill at the head of a deep bight, before rounding Windmill hill, but this bight must not be mistaken for the harbour. Here is a castle, with remains of Cyclopean walls, and on the Windmill hill is a circular Hellenic building.

Every thing here bespeaks commercial vigour and prosperity. Provisions of various descriptions can be obtained; even rum and potatoes. The population of this place may amount to 1000 persons, among whom are foreigners, who live here as agents and merchants from various sea-ports to purchase sponge, and these with Greek skippers and pilots form a miscellaneous race.*

GULF of SYMI.—The existing charts, in general, do not give the faintest resemblance of the coast forming the Gulf of Symi; but they will be rectified by the recent surveys. There are two headlands where the charts exhibit *Cape Volpo*; one stretches to the southward and the other approaches the island Symi. From the latter of these points the coast forms a capacious bay, before reaching the larger gulf. Two other headlands, nearly on the same meridian as the former, lie between the above-mentioned bay and the Gulf of Symi. Off the southernmost of these is a dangerous patch of rocks, barely above water. The bearing of the north point of Symi from the shoal is W. by N.: the nearest headland toward the Gulf of Symi N.E.: the east point of Kiskilies S.S.W. Distance from the shore from half to three quarters of a mile.

Rounding the two headlands, already mentioned, the gulf is open. Five islands lie on the right or southern shore; the first three small, the last two much larger. The larger islands are so shut in with the main as apparently to form a separate bay. Within these islands the main land is bold and indented. Passing a deep bight, opposite the fourth island, is a bold and precipitous cliff. The scenery here is grand and imposing. There are patches of cultivation on the larger isles; an islet lies between the fifth island and the main. At the termination of the cliff a large bay opens, affording a most attractive view. On the farther shore of this bay are the ruins of a city and castle, crowning the summit of a hill. The northern shore of the gulf is barren, red, not so deeply indented, and forms from its colour a strong contrast with the opposite coast. The narrowest part of the gulf is nearly abreast of the fifth island, perhaps about two miles, and its depth may be roughly estimated from 12 to 14 miles.

GULF of KOS.—The remarks on the imperfect representation of the Gulf of Symi apply equally to the *Gulf of Kos*. From some "Notes" by Lieut. *Saumarez Brock*, R.N. given in vol. ix. of the Journal of the R. Geog. Society, we take the following extract.

* Mr. Brooke visited Symi in his yacht during the spring of the year 1837.

"The

"The Gulf occupies an extent of nearly sixty miles from east and west, and is very deep, no bottom in the middle of it with 300 fathoms of line, and even in the vicinity of the shore seldom less than from 50 to 70 fathoms. No chart extant gives an idea of its shape or extent, and the isthmus [between the two Gulfs] has been, hitherto, laid down apparently by guess. In the summer months the upper part of the gulf is unhealthy, and is abandoned by the inhabitants in order to escape the malaria.

"The description of the isthmus given by Herodotus is true to this day: it is about half a mile broad: a natural ravine, which extends from the Gulf of Symi, might, with a little exertion, and by digging through a hill of inconsiderable height, convert the promontory into an island."

"The city of *Budrun*, the *Boodroom* of the charts, on the North side of the gulf, has passed through many hands, and several styles of architecture may be seen. The walls, which are plainly traced, and in some places perfect, are principally Cyclopean, repaired at different periods with Hellenic masonry," &c.

Again,—“The gulf is of a very peculiar shape, taking that of a canal toward the bottom, bounded on the North side by precipitous mountains, falling in a series of cliffs to the water's edge, and on the South side by a constant succession of broken hills and deep ravines, with small patches of ground capable of cultivation;—in some places well watered, and covered by most luxuriant vegetation. The rivers which water these small plains find an outlet in low marshy ground in the harbours, but, owing to the flat nature of the ground, are salt at some distance from the sea, and can only with great difficulty be made use of for watering, and then only by carrying breakers up the valleys. There are no inhabitants near the coast.”—*J. R. G. S.* vol. viii., 428.

SCALA NUOVA.—(Vol. ii. page 123.) The following is the description, &c. by Sir John Franklin, in 1832.*

The **BAY OF SCALA NUOVA** is formed by an indentation of the coast about a mile in depth. As the island *Koosh Adassi* is separated from the main by a very narrow channel, which is shut in at the anchorage, that island and a remarkably white cliff to the N.E. may be considered as the projecting points of the bay. These points are nearly two miles apart, but in consequence of a very dangerous spit stretching out three-quarters of a mile to the west from the white cliff, which must not be approached nearer than to 8 fathoms of water, the navigable channel is reduced to a space of little more than one mile and a quarter, the deepest water being near the island. We first struck sounding in 20 fathoms, when at the estimated distance of a mile and a half from the largest minaret in the Turkish quarter of the town, and speedily shoaled to 18, 16, and 13, fathoms; the anchor was dropped in 13½ fathoms; but, after veering to 46 fathoms, and swinging to the wind from S.W., the ship's stern, by trailing toward the spit, was in 10 fathoms. The bearings then taken were:—the centre of the castle on *Koosh Adassi* S. 65° W.; extremes of the island from S. 58° W. to S. 70° W.; the loftiest minaret in the Turkish or Lower Town, S. 4° E.; the white cliff, above-mentioned, N. 50° E.; point of *Ephesus Bay*, N. 17° E.; entrance to the *Ephesus River*, N. 12° E.; *Port Hypsili*, N. 47½° W.; entrance to *Port Vathi*, S. 81° W.

The best berths, which are in 13 and 14 fathoms, and nearer to the island, were occupied by merchant vessels, which prevented our taking them.

The Bay of *Scala Nuova* is entirely open from North to S.W. by the west, between which points, during summer, the sea-breezes invariably blow; these are often strong, and always throw in a heavy swell. The holding ground is good, but the Bay cannot be considered as a secure anchorage for vessels of any size. The coasters and smaller merchant vessels obtain some shelter from the swell by hauling close, either to the main shore or to the island, and securing with a warp. In these situations they could not lie with safety, if the wind blew fresh from the North and N.E.

During the summer months, when the sea and land breezes are alternate and tolerably regular, ships can get out of this anchorage in the night or early morning; at which times, the boatmen told us, the current generally sets out of the bay; which it is natural to suppose would be the case, from the water forced in by the sea-breeze seeking its level as soon as that breeze had subsided. If a smart ship were anchored well over toward the castle, and the swell was not very heavy, she might, perhaps, be able to weather the spit, and get

* First given in the *Nautical Magazine*, Feb. 1835.

out with the sea-breeze; though no ship could have attempted it with safety from our anchorage.

The longitude of the white cliff was observed to be $27^{\circ} 16' 31''$. Variation of the compass, at the same place, $14^{\circ} 10' W$.

Provisions and wood can be procured in abundance. Water may also be had from the fountains in the town, but not in any considerable quantity for a ship of war. The times for watering must be the night or early morning, when the swell has gone down.

The town of Scala Nuova (1832) is said to contain about 8000 inhabitants, of whom 800 are Greeks, 200 or 300 Armenians and Jews, 2000 Turks, or Mohammedan Albanians, as they are styled, who were driven from the Morea at the commencement of the Greek revolution, and the rest Turks proper. The Turkish population reside in their own quarter of the town, which is walled, and the gates are closed every evening. Several Turks from the Morea reside in the Greek quarter, which is built on the side of the hill.

The export trade of Scala Nuova is in dried fruit, corn, beans, a little wine, some cotton, and occasionally valonia, which are shipped, principally, in Greek, Austrian, Sardinian, and Ionian, vessels. English merchant vessels are rare, and come for valonia only.

SCIO.—(See vol. ii. page 124.) Two light-towers, based on rock, before the port, indicate to shipping the track for entering; and a jetty, now even with the water, forms the south side of the harbour: but whether the lights, for a time discontinued, have been re-instated we have not been informed.

GULF of SMYRNA.—(Page 132.) The following Remarks on the BAY of VOURLA, in the Gulf of Smyrna, were written by Mr. Geo. Peacock, master of H.M. steam vessel *Medea*, in 1834.

The anchorage known as Vourla Bay is situate on the S.W. side of the Gulf of Smyrna, about nine leagues from Cape Calaberno, [*Kantlu Bouroun*,] within the islands of Hourlac or Dourlac, which are seven in number, namely, Long Island, Partridge Island, Goat Island, Rabbit Island, St. John's Island, Round Island, and Clazomene. There are also two small islets off the north end of St. John's Island, and two off the N.W. point of Goat Island. The passages between these islands, with respect to each other, are all good and clear, except that between St. John's and Round Island, which is contracted to half a cable's length by a reef extending out from their two nearest points: in this channel are 7 and 10 fathoms. That between Clazomene and the main is blocked up by the remains of the antient causey. Ships coming from the westward usually pass outside Long and Partridge Islands, and having rounded the latter, steer for the channel between St. John's and Rabbit Islands; and, having brought the custom-house at the bottom of Vourla Bay on between the break in a row of windmills at Vourla, steer for the former, or, which is the same thing, keep in mid-channel, and having brought the watering place W. by N., haul a little to the westward and anchor where you please. Perhaps the best anchorage is with the bluff point of Round Island E. by N., and the tower to the northward of the watering place N.W., and the custom-house before mentioned S. by W. in 12 fathoms: but, as this anchorage will accommodate the largest fleet in the world, you may pick up any berth you please, only be careful not to approach too near the south point of Goat Island, as a shoal, with only 18 feet on it, lies S.W. from it, about two cables off, and do not go into less than 5 fathoms in the bay to the southward of the round tower.

If desirous of passing between Long Island and the main, keep the S.W. point of Long Island open on your larboard bow; and as you approach it you will perceive a small low islet lying off it, which must not be passed nearer than half a mile. Having rounded this islet, you will see Partridge Island come open; it is high, and has a peak at its northern end. Open its northern end a hand-spike's length to the southward of the south point of Long Island, and then haul up for the centre of Partridge Island W.S.W., steering that course until Round-tower Point, which at this distance makes like an island, and has a tower on it, comes on with another (high) point to the southward of it, bearing S. $\frac{1}{4}$ E., or until the custom-house in the bottom of Vourla Bay comes open of the latter; you will then be clear of the shoal which lies off the point Hourlac, half a mile, having 15 feet on it, and may steer for the custom-house, passing in mid-channel between Round-tower point and Goat Island: do not borrow on the latter, on account of the 18 feet shoal before mentioned; and, having brought the watering place west or W. by N., anchor as before stated. The holding ground is excellent, being stiff mud.

A pier has been erected by the squadron at the watering place, which facilitates the mode of

of watering: the fountain is about 20 fathoms from the pier-end, and the water is filled by a common hose raised at one end by boats' oars, or a force-pump may be applied with good effect.

For Mr. Hall's Directions for the Strait formed by the point of St. James's castle, &c., see vol. ii. page xxv.

TENEDOS.—(Page 157.) This island, with the islets, &c., in the vicinity, may be more correctly described as follows:—

Tenedos is six miles long from east to west, $3\frac{1}{2}$ broad on the east, and tapering to a low point on the west. From the ruins of *Eski Stamboul* [ant. *Alexandria Troas*,] its nearest distance is $3\frac{1}{4}$ miles; the channel between being three miles broad, and the depths, excepting the northern part, 13 to 7 fathoms. The highest land is to the N.E., and the port occupies the N.E. angle of the island. The town is described in its place (vol. ii. p. 157.) At a mile to the W.N.W. of it is *Mount Elias*, a sugar-loaf hill, 625 feet high above the sea.

The S.E. part of the channel, to the N.W. of *Eski Stamboul*, is impeded by shoals extending nearly a mile and a half to the N.W. from the main land, but immediately without them are 10 and 11 fathoms of water: and in the northern part of the channel, at a mile to the eastward of the port of Tenedos, is an islet named *Malvino*,* having near its western side a ledge of rocks, noticed in page 158: but the passage between the latter and the port is three-quarters of a mile wide, with the depths of 9 and 10 fathoms; and it is the safest and best for shipping. The *Black Cape*, at the base of *Mount Elias*, the northernmost point of the island, is nearly a mile to the N.W. from the town of Tenedos. At N.N.E. one-third of a mile from the cape, is an islet, *Petra-nisi*, and about one-tenth of a mile to the west from the latter, is a sunken rock, on which *H.M.S. Talbot* struck on the 22nd of November, 1838. The ship ran aground at 11 a.m. and floated off, uninjured, at 6 h. 15 m. p.m. after her guns were taken out and her water started. Upon the shoal the ship had 11 feet, hard rock, under the fore foot; 21 feet in the after part of the fore chains; and all afloat elsewhere, except to the N.W. 2½ fathoms.

On the eastern side of the *Malvino*, or *Gaidaro-nisi*, the passage for large ships is only half a mile wide, being limited on the east by a patch of only 16 feet, now called the *Ocean Reef*, but the depths are 6 and 7 fathoms.

The *Koum Bournou*, or *Sandy Point*, noticed in page 159, lies nearly true East, three miles, from the port of Tenedos, in latitude $39^{\circ} 50' 30''$, and the shoal water extends from it one mile W. by N., in the direction of the *Ocean Reef*; its depths being $2\frac{1}{2}$, 3, and 4, fathoms. Small vessels may, therefore, pass over it. The anchorage in *Bassikia* or *Vasikia Bay* is $3\frac{1}{4}$ miles to the northward of the *Sandy Point* (*Koum Bournou*), and the distance thence to the entrance of the *Dardanelles* is seven miles.

GULF OF SAROS.—(Vol. ii. p. 152.) Should a vessel on entering the Gulf of Saros be taken with a S.W. gale, she may keep on a N.E. course until she gets to the eastward of *Cape Ibridgi*, when she may anchor in two fathoms, close in shore, and thence steer for the south side of the *Panagia Isles*, at the head of the Gulf, where there is anchorage in 17 fathoms, clear of all danger.

MOUNT ATHOS.—(Page 149.) Of this remarkable peninsula and its monasteries a copious and curious description, by *Lieut. Webber Smith*, (48th regiment,) was given in the *Journal of the R. Geog. Society*, vol. vii. pp. 61—74; 1837.

The peninsula, the *Acte* of former days, is now the *Agion Oros* (pr. nearly as *Ayon Oro*) of the Greeks, and *Monte Santo* of the Franks. It is connected to the main land by a low sandy isthmus of undulating ground, while its south-eastern extremity rises abruptly to the height of 6349 feet above the sea.

The general aspect of the peninsula is rugged, being intersected by innumerable ravines. The ground rises almost immediately and rather abruptly from the isthmus at the northern end to about 300 feet, and for the first twelve miles maintains a table land, the elevation of which is about 600 feet, beautifully wooded. At this spot the peninsula, between the monasteries of *Valopedi* on the east, and *Kastamonitu* on the west, is narrowed in to rather less than two miles in breadth. It immediately afterward expands to its average breadth of four miles, which it retains to its southern extremity. From this point also the land becomes mountainous rather than hilly, two of the heights reaching, respectively, 1700 and 1200 feet above the sea. Four miles farther south, on the eastern slope of the mountain ridge, and at a nearly equal distance from the east and west shores, is situate the little town of *Karyés*, placed amidst vineyards and gardens.

* By some Greeks called *Gaidaro-nisi*.

Immediately to the southward of Karyés the ground rises to 2200 feet, whence a rugged broken country, covered with a forest of dark-leaved foliage, extends to the foot of the mountain, which rears itself, in solitary magnificence, an insulated cone of white limestone, rising abruptly to the height of 6350 feet above the sea. Close to the cliffs at the southern extremity no bottom was found with 60 fathoms of line.

The town or village of Karyés is at the head of a valley looking down toward the sea, almost encircled by an amphitheatre of hills, covered with a rich mass of foliage. It is the residence of the Agha, a kind gentlemanly man, who with his brother are the only Turks on the peninsula.

A weekly fair or market is held here on Saturday, which presents the singular spectacle of a fair without noise, and a crowd without a woman. "I should rather say without any thing *tame* of the feminine gender. Horses, bulls, rams, and cocks, are not uncommon; but every thing of the other sex is absolutely forbidden, as far as man can forbid; but uncivilized nature asserts her rights, and wild pigeons and other birds, and insects, especially bees, abound, and, in spite of the monks' unnatural regulations, afford a valuable source of profit."

The position of the Peak of Athos, according to the late survey, is, latitude $4^{\circ} 10'$, longitude $24^{\circ} 20\frac{1}{2}'$.

SAMOTHRAKI.—(*Page 152.*) This island was visited by Lieut. Webber Smith, in 1836, who landed on its N.W. end; the land thence rises abruptly to the height of 5248 feet above the sea, abounding in rocks, trees, and streamlets. Sailed thence to the west point, landed, and rode three miles to the village of about 300 houses, all Greek, with a Turkish agha. During the revolution the Turks burnt their church, which was rebuilding. The people appear a hardy set of mountaineers, but in abject poverty.

THASOS (*page 151.*) was also visited by Lieut. Smith, who describes it as another beautiful island, larger than Samothraki, but not so lofty; the summit of Mount Ipsarió, the highest in the island, reaching only 3428 feet above the sea. Here rock is piled upon rock, the whole thickly wooded with pines. The northern point of the island is distant only three miles and a quarter from the plain of the *Kara Sou* (or Black water) on the southern shore of Rouméli (ant. Thrace).—*Journal of the R. Geog. Society*, vol. vii. p. 64.

THE DARDANELLS.—(*Vol. ii. pages 158, 9.*) Observations by Captain G. Martin, C.B. of H.M.S. *Volage*, on entering the Dardanelles with an adverse wind.

"It is an opinion pretty generally entertained, that ships entering the Dardanelles must necessarily wait for a fair wind; and under this impression numberless merchant-vessels are frequently detained in Bassikia Bay, and in the neighbourhood of the outer castles. This opinion I am satisfied is incorrect, not only from my own observation but from the information I have been able to collect from those who have had opportunities of visiting these straits, under various circumstances and at various seasons of the year. Ships on leaving Bassikia Bay, and crossing the current, should endeavour to fetch, and, if possible, to weather, Imbros; which may be done with a moderate breeze (the wind against them) without any difficulty; they will then almost invariably find the wind coming down between Imbros and the main, or from the N.W.; and, on approaching the main land, sufficiently favorable to enable them to fetch into the eddy on the Asiatic side, when they can easily work up to the anchorage of the white cliffs. They will be then ready to take advantage of any change or slant of wind, which will enable them to pass the Dardanelles or Narrows, between the old castles of Europe and Asia: this effected, they will then keep the Asiatic shore on board, where there is a remarkably strong eddy; and, should the wind not prove favorable for passing Point Nagara, they may anchor off the Kiosk. (*Page 163.*)

"I am satisfied that much time is lost from the impression that great difficulties exist in this passage, and consequently many are deterred from making an attempt, the result of which might be attended with considerable saving of both time and expense, objects of no small importance to mercantile men."—*Naut. Mag. Dec. 1835.*

DARDANELLS and BOSPHORUS.—(*Vol. ii. p. 165.*) It appears from recent reports, that the shoal grounds have increased on the eastern shores both of the Dardanelles and Bosphorus. The bark *Mary Anne*, Capt. Anderson, early in 1839, on returning from the Black Sea, touched the edge of the bank which extends from Khardaki Point, on the N.E. shore of the Dardanelles, from its having been inaccurately laid down in the chart, the bank extending half a mile farther out than it was represented.

[In page 165, line 6, the bearing N.E. $\frac{1}{2}$ E. should be N.E. $\frac{1}{2}$ N.]

The

The extended shoal in the Bosphorus is that described by Captain Middleton, (vol. ii. page 181,) first given in the *Nautical Magazine*, March, 1833, and January, 1834: additional particulars have been given in the same miscellany, of July, 1840, by Mr. George Wright, master of H.M.S. *Dido*, which are nearly as follow:—

The shoal on the Asiatic shore, opposite to the village of Buyukdereh, on which several ships have struck, has its northern extremity in 5 fathoms, at about 2½ cables S.W. from the point at the foot of Mount Gheant or Giant's Mount, which has a farm on its summit: this farm then appears open to the right of the first quarry near the beach, E.N.E., and an old round tower, standing upon the high land on the European shore, a ship's length open to the eastward of the 'Walled Fort,' N.N.E. ½ E. The black gate of the Russian ambassador's palace at Buyukdereh, will then be on with the Scala and central window, bearing N.W. ½ W.

The Bank extends thence, in a southerly direction, nearly three-quarters of a mile, to within two cables of the north point of the bay of the Sultan's valley,* varying in breadth from 100 to 30 yards, and having over it from 6 fathoms to 6 feet of water; it is composed of a dirty kind of sand and gravel, with detached stones. At the southern extremity, in 7 fathoms, the British Ambassador's palace at Therapia is its own breadth open to the southward of a remarkable grove of trees behind it, W.S.W., and the *Sanita*, or Health-office, E.S.E. is just open of the point.

Nearly in the centre the shoal is divided by a channel about 30 yards broad, east and west, having 10 to 13 fathoms, and thus forming two distinct patches, which, in the event of a ship grounding near it, might be available; otherwise, from the general strength of the current this passage could scarcely be turned to any account.

It is only in the event of working to the southward, or having a scant easterly wind, that a necessity would arise for borrowing on it; but there is no such necessity, for the channel between it and Therapia (on the western shore,) affords ample room for a ship under any circumstances; yet several vessels from the northward have been seen when skirting the western edge of the bank, as if apprehensive of falling to leeward upon the spit of Yenikioy Point, forgetting that the current there generally sets out so strong to the S.E. that they could hardly fail in avoiding it.

Eastward of the bank there is a very good channel and anchorage, having from 5 to 15 fathoms, and ships from the southward, with a commanding breeze, may use it with great advantage, as the current is at all times much less there than in the stream. From the Black Sea, with a northerly wind, this route will shorten the distance considerably, and prevent a necessity for anchoring at Buyukdereh or Therapia, should the wind fail.

On approaching from the northward, in order to sail on the west of the bank, bring the Old Genoese Castle on with a signal post in the fort at the foot of the Mount Gheant, until the southernmost high clump of trees opposite Yenikioy Point comes just on with it; or, if they are obscured, until the old round tower above the Walled Fort on the European side comes open to the westward of its flagstaff. Run thus until the Health Office, S.E. by E., is well open of Unkiar Skelessi Point, when you may haul over for it, as ships generally communicate here.

In working to the southward, stand no nearer to the Bank than in 12 fathoms, nor open the round tower to the eastward of the flagstaff in the Walled Fort, as it is very bold-to, shoaling suddenly from 15 to 5 and 2 fathoms.

If, from the northward, you intend to pass through the eastern channel, haul round the point as close as you please, in 7 or 8 fathoms, in order to avoid the current which here sets strongly toward the shoal; stand into the little Bay of Quarries, until Yenikioy Point comes a ship's length open of the point of Unkiar Skelessi, which will lead through in from 12 to 8 fathoms.

Ships from the southward will have no difficulty in observing these directions in a contrary manner. Another leading-mark, and which may be found more convenient, is a remarkable brown patch, on the highest land above the Walled Fort, kept on with its eastern angle.

The master of a ship, not wishing to delay at Constantinople, and particularly if in

* This point is called, from a monument upon it, to commemorate the Treaty of Peace, the point of *Unkiar Skelessi*.

want of water, may find a good and well-sheltered anchorage off the Sultan's Valley, and if he takes a boat to Constantinople and arranges his business with the consul, he will, on his return, find the ship watered, and he clears the Bosphorus without having to anchor in the *Golden Horn*, or Port, a place which is, in winter, very inconvenient, from its depth of water, with its crowded and exposed state.

VOYAGES of the ACTÆON.—NAPLES to the ARCHIPELAGO, DARDANELLS, and BOSPHORUS.

In the years 1833, 34, H.M.S. *Actæon*, Captain the *Hon. F. W. Grey*, was engaged in the navigation between Malta and the Bosphorus or Channel of Constantinople. On the 25th of January, 1833, she left the harbour of Valetta, being towed out against a heavy swell and a fresh N.W. wind. Baffling winds succeeded. At 4 p.m. of the 26th she passed the low sandy point of Cape Granitola, the S.W. point of Sicily, and thence proceeded to Naples, where she arrived on the 28th.

On the 6th of April the ship was under way for a voyage to the Bosphorus. At 4 p.m. on the 8th she entered the Strait of Messina, with a fresh breeze from the N.W. After rounding the Faro it was observed that the vessels, which kept on the Calabrian shore, carried a steadier breeze than those on the Sicilian; for while some were nearly becalmed off Messina, the others were running through with a fine breeze.

On the passage between Cape dell' Armi, the S.W. point of Calabria, and Cape Matapan, the south point of Greece, fresh breezes from the westward and a heavy head swell, with current generally to the S.E. Squally, unsettled weather succeeded, with rain and lightning, which cleared away to a fresh northwestern and fine weather. In lat. $36^{\circ} 13'$, and long. $22^{\circ} 8'$, it appeared that the ship had been set 20 miles to the southward in the last twenty-four hours.

On approaching Cape Matapan it was found that the wind under the Cape was blowing a heavy gale from N.W. Lay by during the night, and at 4 a.m. made sail with a moderate breeze at N.E., and worked through the Servi Passage. Met a heavy northerly swell on opening Cape St. Angelo, worked up to the northward against light northerly winds, and thence proceeded to Nauplia, where the *Actæon* anchored on the 13th.

Leaving Nauplia on the morning of the 15th of April, the ship passed Spetzia and pursued her course through the Hydra Passage to the Gulf of Egina and the Piræus or Port of Athens, where she arrived on the 16th, and anchored in $7\frac{1}{2}$ fathoms. On the 17th again under way; cleared the Zea Passage and passed through the Strait of Silota with light variable winds. On the morning of the 19th, with a breeze from the southward, proceeded thus, north-eastward, to Cape Baba in latitude $39^{\circ} 30'$, and the wind drawing round to N.E., worked up inside of Tenedos, and anchored in Basikia Bay. (This bay is described in vol. ii. page 159.) From the anchorage here, in $7\frac{1}{2}$ fathoms, quite sheltered from N.E. winds, the Sigeon promontory bore N. $\frac{1}{2}$ E.; Smaller Rabbit Island N.W. by W. $\frac{1}{2}$ W.; and the town of Tenedos S.W. by W.

On the morning of April 23rd the *Actæon* was again under way, and, working up with a moderate breeze, entered the Dardanelles with a N.W. wind, and ran up on the European shore till nearly as high as Point Barbiero; when, the wind coming from the N.E., she stood across and anchored off the white cliffs, in 10 fathoms, with the southernmost of the two large white cliffs E. $\frac{1}{2}$ N.; Point Barbiero N.N.E. $\frac{1}{2}$ E.; and the valley opposite N.N.W. $\frac{1}{2}$ W.

The influenza on board and adverse circumstances detained the ship until the 26th, when she got under way with a fine breeze from the southward, but which soon failed. On the morning of the 30th a fresh southerly breeze enabled the ship to pass the castles and enter the Sea of Marmara. Having passed Gallipoli, she steered E.N.E., a course which carried her five miles to the northward of the island Marmara. With a course altered to East, 51 miles, land was seen; hauled up N.E., and, at 6 p.m. passed the Sultan's palace at Constantinople.

BOSPHORUS.—May 1st, 1833, to Jan. 1st, 1834.—During the summer months the *Actæon's* anchorage was at the distance of a cable and three-quarters west from the point of the Asiatic shore, off Therapia; both in order to be near the palace, and from its being considered much more healthy to be in the full draught of the sea-breeze, than by a nearer approach to the marshy ground at the entrance of the river, to run the risk of the fevers so prevalent in all the valleys and low grounds in the month of August. Whether owing to this precaution, or not, during the whole summer they had only one case of fever, and that, although severe, not fatal.

Captain Grey adds, "The holding-ground here is not of the best kind; but with a good scope of cable (we veered to 100 fathoms chain) there is no risk of the ship driving; certainly not with westerly and southerly winds, which alone would be dangerous; and the current, with few exceptions, I believe I might say during the summer without an exception, running constantly down, a ship never goes near her anchor. The shoals a-head, in a great measure, prevent the risk there might otherwise be of vessels coming down running on board. In fact, I recommend this anchorage as much the best in summer.

"Upon

"Upon our return to the Bosphorus, in November, we took up a berth with the above-mentioned point N.N.W. of us, about $1\frac{1}{2}$ cable's length from the mouth of a river; and we have found it so sheltered that, in the heavy gale of the 15th and 16th of December, which did so much damage in the Black Sea and Archipelago, the ship rode perfectly easy, without veering any cable. A French brig of war, in Therapia Harbour, rolled very heavily, and had great difficulty in keeping clear of the two or three other vessels lying there.

"In the month of May and beginning of June the weather was cold and rainy, the N.E. winds being often accompanied by cold damp fogs from the Black Sea. From the beginning of June till the middle of September there was no rain, the weather fine, and the heat seldom oppressive. Toward the end of September the weather broke up, and we had squalls and rain: and, in the beginning of October the weather was variable and unsettled. From the 12th of October to the 8th of November we were absent from the Bosphorus.

"On the 9th and 10th of November the wind was southerly, with fine weather; and from that time to the 3rd of December the N.E. wind blew almost without interruption, sometimes fresh and cold. During the month of December the wind was generally from the southward; on the 13th it blew fresh from the westward, and the same night shifted suddenly to the N.W. and then N.E. where it freshened up by the following night to one of the heaviest gales known here for many years, accompanied by heavy rain and sleet. On the 16th it moderated, and again came from the southward. On the 26th it blew fresh from the S.W., and in the night the wind again suddenly shifted to the northward, and blew hard for two days from N.E., when it again came to the southward."

From a register of winds at Therapia, May to December, of 205 days, those from north to east were 139; from S. to W. 45; calm and variable airs, 21.

Captain Grey describes in detail his subsequent passages from the Bosphorus to Smyrna and again from the Gulf to the Bosphorus, as given in the *Nautical Magazine* of October, 1834, from which we have made the preceding abstract. His description of the navigation in the southern part of the Sea of Marmara and Gulf of Moudanieh is entitled to particular notice. *Moudanieh*, on the south side of the gulf, is the sea-port of *Brusa*; the country round it is laid out in vineyards, interspersed with olives, and appears to be very fertile: but the anchorage is open, with soft ground. At the head of the gulf is the town of *Gumehlek* or *Ghemlek*, having a building-dock, and which is inhabited chiefly by Greeks under a Turkish agha. The country here is likewise very fertile, and some trade is carried on in wine, oil, and silk.

THE EUXINE or BLACK SEA.

Northern extremities of the Bosphorus.—(*Vol. ii. page 179.*) Two new towers, with lights on the improved principle, at the northern entrance of the Bosphorus, were completed in January, 1839, and that on the European side has been particularly noticed as very effective: but the dues intended to be exacted for their support have been very unsatisfactory, as much too high: a more equitable rate, however, if not already established, may be expected. (*January 16, 1839.*)

TRADE with TURKEY. New Quarantine Regulations, dated "Office of Committee of Privy Council for Trade; Whitehall, October 14, 1839."

By a Tariff of quarantine duties at Constantinople the charge varies on vessels, of 1000 kilogrammes to 12,000, for a bill of health, from 2 to 24 piasters; for the vessel herself, from one to 12 piasters.*

Every vessel arriving at Constantinople, from any port whatsoever, shall be liable to a duty, on interrogation, which varies from 2 to 20 piasters, in proportion to the size of the vessel. Vessels while in quarantine are also to pay a duty, which varies according to the size, from 8 to 35 piasters. In this duty is included the pay of the guards of health, until the arrival of the vessel at Constantinople. With respect to the guards taken on board at the Dardanells, or at Gallipoli, they shall be paid for at the rate of 10 piasters per diem until the arrival of the vessel in this capital. In either case the board of the guards shall be at the expense of the captains.

Travellers entering the Lazaret are to pay for each guard of health, besides board, daily, 10 piasters; for each room, for perfumes, during the whole quarantine, 45 piasters. No charge shall be made for lodging.

Each bale of merchandise, weighing not above 40 okes, is to pay one piaster, and above 120 okes it pays 4 piasters. Valuable merchandise, the disinfection of which would be difficult, pays quadruple.

* The Kilogramme, French, is a trifle more than 2lbs and 68 hundredth parts of English Troy weight; or 2lbs and .20543 dec. avoirdupois.

Oxen, cows, horses, camels, asses, calves, mules, and other quadrupeds of this kind, each pay 2 piasters.

Sheeps, goats, kids, lambs, and other quadrupeds of this kind, each 20 para.

Fowls, geese, ducks, and other birds of the same kind, each 1 para.

The duties established by this tariff are payable at Constantinople only, and cannot be charged at either of the sanatory offices of the Dardanells or of Gallipoli.

All vessels, Ottoman or foreign, shall be equally liable to them, with the exception of vessels of war, without distinction of nation, liable to quarantine, which shall be free from payment for their guards of health.

Constantinople, June 22, 1839.

(Translation.)

COUNCIL OF HEALTH.

GENERAL REGULATION FOR OBJECTS ARRIVING BY SEA.

The undersigned, composing on the one side the Council of Health, under the Presidency of his Excellency Hifzy Moustapha Pacha, and on the other, the foreign delegates accredited to the said council by the different embassies, at the request of the Sublime Porte, having met in conference for the purpose of deliberating upon the choice of the quarantine system best adapted to this capital against objects arriving by sea, being animated with an equal desire to reconcile as much as possible the sanatory provisions with the wants of the maritime commerce, have, after mature deliberation, unanimously agreed upon the following resolutions:—

“Article 1. Every vessel arriving at Constantinople shall be provided with a bill of health, which it (the captain) shall be bound to deliver to the chief officer of the Sanatory Board, whose duty it is to demand it, and who shall receive it upon the end of a pole, without boarding the vessel.

“Art. 2. There shall be three descriptions of bills,—viz.: the Clean Bill, the Suspected Bill, and the Foul Bill.

“Every bill delivered 30 days after the last case of plague shall be considered *clean*. The vessel which carries it shall be admitted to free pratique, with its passengers, crew, and cargo.

“Every bill delivered 15 days after the last case of plague shall be considered *suspected*. The vessel which carries it shall perform a quarantine of 15 days if it be laden, and of 10 if in ballast.

“Every bill delivered within less than 15 days since the last case of plague shall be considered *foul*. The vessels which carries it shall perform a quarantine of 20 days if it be laden, and of 15 if in ballast.

“Art. 3. The period of quarantine, for laden vessels, as well suspected as foul, shall commence from the day on which they shall anchor before the Lazaret of Kouleli. Considering, however, on the one hand, that the weather may sometimes prevent them from proceeding to that anchorage, and on the other, that at present there exists no means of towing them thither without delay, it is agreed that warehouses shall be constructed with as little delay as possible upon the Point of Fener Bakteche, to receive the cargoes of vessels placed in the above circumstances, the quarantine of which shall in that case commence from the day of their anchoring at the said Point of Fener Bakteche.

“It is understood, moreover, that this facility shall be granted only to vessels evidently prevented by the weather from proceeding to the Lazaret of Kouleli, and until the Sanatory Board shall have at its disposal suitable means for conducting them thither, notwithstanding the wind.

“Art. 4. The quarantine for vessels in ballast, as well suspected as foul, shall commence to reckon from the day of their arrival.

“Art. 5. Every suspected or foul vessel, whether laden or in ballast, arriving by the Straits of the Dardanells, shall be bound to take on board a guard of health either at the Sanatory-office of the Dardanells or at that of Gallipoli, according to the captain's choice.

“If the vessel be in ballast, its quarantine shall count from the day on which the guard goes on board, upon condition that it be subjected to the measures of disinfection prescribed by the latter. In this case, if the vessel shall have completed the quarantine during the voyage, it shall be received to free pratique at Constantinople.

“If the vessel be laden, its quarantine shall in every case commence from the day of its anchoring at Kouleli, or at Fener Bakteche.

“Upon their arrival at Constantinople, vessels with cargoes, as well as those in ballast, which shall not have completed their quarantine on the voyage, shall receive an additional guard, which they shall keep, together with that taken on board at the Dardanells or at Gallipoli, until the expiration of their quarantine.

“It

"It is understood that vessels with a clean bill shall not be obliged to stop either at the Dardanelles or at Gallipoli.

"Art. 6. Suspected or foul vessels in ballast may cast anchor at the entrance of the harbour, or in the canal at some distance from the shore, under the inspection of their guards. Vessels arriving with cargoes shall enjoy the same privilege, but not until after unloading their cargoes, which they should first discharge at Kouleli or at Fener Bakthe.

"Art. 7. Vessels laden or in ballast coming from the Mediterranean and bound for the Black Sea, with a suspected or foul bill, shall be equally bound to take on board a guard of health at the Dardanelles or at Gallipoli, whether they intend to complete their quarantine at Constantinople or prefer continuing their voyage, performing it *en route*. On their arrival here they shall hoist at the mizenmast a flag of two stripes, yellow and black, placed vertically, which they shall keep flying until their departure.

"It shall be lawful for such vessels to perform their quarantine at Constantinople, submitting to the measures laid down in the preceding articles for vessels bound to this port: but in this case the captains must declare their intention at the time of the examination to which they will be subject.

"If, on the contrary, they prefer continuing their voyage, performing their quarantine *en route*, they shall receive on their arrival an additional guard, which they shall keep on board until their departure, together with that received at the Dardanelles, or at Gallipoli, and before their entry into the Black Sea they shall disembark both at the sanatory port of Kavak. With respect to merchandise and passengers destined for Constantinople, they shall be disembarked at the Lazaret of Kouleli, or shall complete their quarantine conformably to the sanatory conditions applicable to the vessel.

"The boat belonging to the Sanatory Board charged with the duty of examining the bills shall without delay notify the arrival of the vessels to their respective embassies, in order that they may prepare for them, with the necessary precautions, the customary warrants and firmans for the Black Sea.

"It is understood that such vessels being in ballast, and wishing to avail themselves of the facility for commencing their quarantine at the Dardanelles or at Gallipoli, upon the terms contained in the second paragraph of the fifth article, shall be entitled to that privilege: but in this case they must previously declare their intention at whichever office they take their guard of health, in order that the latter may subject them during the voyage to the necessary measures of disinfection.

"Art. 8. Vessels coming from the Black Sea, with suspected or foul bills, whether with cargoes or in ballast, shall take a guard of health at the Sanatory-office of Kavak, or that of Silvi-Bournou if the weather shall render it wholly impracticable to stop at the former place; but they will not have to undergo an interrogatory at either of those places. This formality shall be executed at the Lazaret of Kouleli, where they also shall receive their additional guard.

"All the dispositions of the seventh article relative to suspected or foul vessels bound to the Black Sea are equally applicable to vessels coming from infected ports in that sea, and which, being bound to the Mediterranean, do not desire to perform their quarantine at Constantinople. These vessels, however, shall be at liberty to disembark here, at the moment of their departure, one of the two sanatory guards, and shall keep the other until their arrival at the Dardanelles, where they shall leave it at the Sanatory-office of the place.

"Art. 9. Every vessel arriving either from the Mediterranean or the Black Sea shall undergo an oral examination, when the captain shall faithfully declare the state of his vessel with regard to health, and the communications which he may have had during the voyage. If the vessel be suspected or foul he shall immediately receive the additional guard.

"Art. 10. It is expressly understood that no officer of health, with the exception of the sanatory guards, may in any case go on board of vessels either at Constantinople or in the other ports or places within the Ottoman empire where the sanatory regulations have to be observed.

"This prohibition shall be most rigorously maintained with respect to vessels bound with a clean bill for ports of the Black Sea in which an organized quarantine exists, which do not desire to communicate with Constantinople or any other place in Turkey. These vessels shall moreover be exempt from the obligation of delivering their bill of health to the officer of quarantine.

"With respect to foul or suspected vessels bound for Constantinople, which have already received their sanatory guard, no person shall be permitted to go on board of them, except the medical officer of quarantine, in the special case of there being a person sick on board, in order to assure himself of the character of the disease.

"Art. 11. Any vessel on board of which a case of plague shall have occurred, shall always be at liberty to depart without performing quarantine here. It will only be bound to take a bill of health, which shall mention the occurrence of the said case of plague on board of it.

"Art.

"Art. 12. In order to expedite as much as possible the execution of these sanitary formalities, it shall be compulsory upon all vessels coming either from the Mediterranean or the Black Sea, to hoist at their mizen-mast one of the three following flags, viz. :—

"White, for a clean bill.

"White and black, for a suspected bill.

"Black, for a foul bill.

"The vessels mentioned in the first paragraph of the 7th article are exempt from the obligation to hoist these flags.

"Art. 13. In order to save a considerable expense to the steam-boats which are making weekly trips, it shall be lawful for them to keep their guards on board all the time that the ports with which they are in communication shall be infected or under suspicion.

"Art. 14. Every vessel bearing a clean bill, which shall have had communication *en route* with a suspected or infected place, shall be subject to the quarantine regulations required by the state of health of that place.

"Art. 15. Passengers arriving in vessels with a suspected or foul bill shall perform their quarantine at Kouleli. Its duration shall be 15 days for a foul and ten days for a suspected bill. It is agreed that passengers arriving from the Mediterranean in vessels in ballast, whether foul or suspected, shall partake of the relaxation accorded to vessels in the second paragraph of the 5th article. Those who shall have intended to perform their quarantine at Constantinople, and shall be on board of vessels which are prevented by stress of weather from putting in at Kouleli, shall be transported thither, together with their baggage, in the boats of the Lazaret, and their quarantines shall commence from the day of the arrival of the vessel.

"Art. 16. All offences against the quarantine regulations shall be tried according to the laws which prevail in Europe, and the offender shall be handed over for punishment to the authority to which he appeals.

"Art. 17. The undersigned having some time ago come to the resolution that the duties of quarantine cannot be levied for two months after the conclusion and signature of the definitive regulations, think it expedient to add here, that this interval shall commence upon the present day, and that, consequently, the payment of the duties will become compulsory upon and after the 10th of August next. The European delegates take upon themselves to request their respective chiefs to recommend to the approbation of their Courts the tariff at that time proposed by the Council of Health and modified by them, in order that during the interval of the two months this point also may be definitively settled.

"Art. 18. It is determined that the maximum duration of quarantine for merchandise shall be 20 days.

"Art. 19. The present regulation having for its object only measures of precaution against objects arriving by sea, the Council of Health upon the proposition of the delegates, undertakes to examine and discuss with them at an early period the question relative to sanitary cordons and local measures of disinfection.

"ADDITIONAL ARTICLE.

"It is expressly agreed that the warehouses to be erected at Fener Baktche, according to the stipulation of article 3, shall be constructed of stone. The delegates allow three months for the erection of these warehouses. Until that time suspected or foul vessels which shall arrive with cargoes will run the chance of contrary weather, if it prevents them from reaching the Lazaret of Kouleli. But the Council of Health pledges itself to employ all the means in its power to conduct them thither at the earliest possible moment, their quarantine commencing to count from the day on which they shall anchor before the lazaret.

"The present regulation shall be deposited in the archives of the Council of Health, and shall be of the same weight as an organic and fundamental Act.

"Done and signed at Constantinople in the Hall of the Conferences of the Council of Health, this 10th of June, 1839."

LIGHTHOUSES IN THE BLACK SEA.

Exclusive of Lights at the entrance of the Bosphorus, already described, those which may be seen on the passage upward to Odessa are, one on Cape Kherson, upon the S.W. of the Crimea, another on Cape Eskiforos or Zarkhan, the third on the western coast of Tendra Island, and the fourth on Cape Fontane, to the southward of Odessa. The tower of *Balaklava*, as shown in page 200, is no longer lighted.

The Lighthouse of CAPE KHERSONESE or KHERSON, which marks the South side of the entrance of the port of Sevastopol, is described in vol. ii., page 201. It exhibits a *red* light, at 130 feet above the sea, which is eclipsed for one in every four minutes.

On CAPE ESKIFOROS, (Page 203) is a tower exhibiting a brilliant fixed light : seen at the distance of 17 miles.

At 2½ miles from the northern extremity of TENDRA, (page 204) a revolving light, at 92½ feet above the level of the sea. The light, gradually increasing, appears in full lustre once in a minute and 20 seconds, and may be seen in clear weather, when 16 miles off.

The Light-tower on CAPE FONTANE, 6½ miles southward from ODESSA, shows a brilliant fixed light, as described in page 199, at 203 feet above the sea, and seen at more than six leagues off.

The S.E. COAST of the CRIMEA is destitute of Light-houses until we arrive at CAPE TAKLI, on the western side of the entrance of the Strait of Kertche, which is now distinguished by a tower, showing a fixed red light. (Page 209.)

YENIKALEH, on the western side of the northern Strait of Kertche (Page 210) : a tower, with brilliant fixed light, seen from the Sea of Azov, 18 miles off.

SEA of AZOV.—On Cape Bielosarai, upon the north coast, about 10 miles to the S.W. of Marioupol, a tower, with fixed light, visible at the distance of 16 miles. (Page 215.)

We now resume the SOUTHERN COAST of ASIA MINOR, eastward of the Gulf of Symi, which has been described in page xiv.

The Coasts of ANADOLI and KARAMANIA have been so well and so fully described by Captain Beaufort as to require no further addition. That survey terminated with the entrance of the Gulf of Iskenderoon, as noticed in page 249, and on this gulf, with the coast southward, we have now to add the information which follows :—

ISKENDERON, &c.—(Vol. ii. page 254.) H.M.S. *Rainbow*, on shaping a direct course from the Khelidonian Isles (longitude 30° 26') to Cape Anamour, in the summer of 1833, appeared to be set one mile an hour to the eastward by the current, contrary to the direction which it generally takes, as noticed in the Directory. This preceded a strong breeze from west, which came on in the same afternoon, and continued the greater part of the night. This breeze, besides advancing the ship rapidly, drove off the dense haze which Captain Beaufort has described (page 235) as prevailing at this season, so as to hide the land, and limit the view within a very short distance. The heat is extremely oppressive in such a state of the atmosphere, and every one felt revived by the change.

On passing the point Lissan el Kahpeh and the river next eastward, at 7 or 8 miles, the current was found setting to the west at the rate of between two and three knots. Hereabout, in every nook of land in which small craft could find shelter, wood was loading, probably for Syria or Egypt. At sea the wind blew strong, and the weather was very unsettled.

Opposite to the Bay of Iskenderoon the wind blew strong from W.S.W., and sent in such a swell as caused the water to break over the shoal parts near the shore, but the anchor was let go in 14½ fathoms :—at three cables' length nearer the town, are 12 and 12½ fathoms, on a spot almost sheltered from the swell by the western point of the bay. The ground is good in every part, and merchant-vessels may anchor near the shore in 7 or 8 fathoms. The water in said to be, in general, smooth, and favorable for vessels to receive and discharge their cargoes.

The bay is open from W.S.W. to N.E.; but in the summer the sea-breezes which come from S.W. and N.W. are said seldom to blow home. The winds most to be apprehended are the gales from the N.E., and the gusts from the mountains; but these are represented as rarely occurring before the commencement of the winter, and in the early spring. This place was formerly much frequented by shipping, and has been disused only on account of the insalubrity of its atmosphere and the oppressive heats of summer, but the atmosphere is expected to be much improved by the drainage of its surrounding swamp, and the health of the inhabitants likewise, by their having comparatively pure, instead of stagnant water : benefits which are owing to the skill and perseverance of Mr. Martinelli, the agent of the mercantile houses of Aleppo and Bagdad, the only European, who, in 1833, was residing at Iskenderoon. The town, still in ruins, stands on a small patch of sand close to the beach,

beach, at the N.E. corner of a swamp, extending nearly a mile from the town to the south and rather more toward the West and S.W. Number of inhabitants, about 200.

If, says the captain, Sir John Franklin, Iskenderoon can be rendered comparatively healthy, as it is acknowledged to be the safest bay for ships on the coast of Syria, it will probably again become the place at which the merchandize of Aleppo will be landed and shipped. The bay has not been altogether deserted by merchant vessels since Mr. Martinelli has resided here. Seven English vessels from London and Liverpool and two French from Marseille, have discharged their cargoes. The imported goods are forwarded to Aleppo and Bagdad on camels. A caravan of seventy camels was dispatched with English merchandize while we were at Iskenderoon, which had been purchased by fourteen merchants of Aleppo, who intended sending the greater part of it as far as Bagdad. Mr. Martinelli, within 14 months, the time of his residence, had despatched a thousand laden camels into the interior. The caravan takes five days to reach Aleppo, which is about 36 hours of a traveller's ordinary rate. The British vessels bring manufactured goods, copperas, indigo, cochineal, and pepper, and receive in return cotton, wool, gall-nuts, dyes, and spices, and occasionally a considerable quantity of gold and silver, the gold in bars and silver in masses.—(*Nautical Magazine*, January, 1835.)

Longitude of the anchorage, $36^{\circ} 12' 38''$: difference in time between this spot and the Arab's tower, Rhodes, Oh. 31m. 55½s. But, assuming the Arab's tower, as we give it, in $28^{\circ} 15' W.$, this would give $36^{\circ} 13' 52''$, or nearly $36^{\circ} 14'$, as in the Table, page xxi, and not $35^{\circ} 12' 38''$, as in the *Nautical Magazine*. Variation of the compass, $8^{\circ} 40' W.$

Another description states that the Gulf of Iskenderoon is nearly surrounded by mountains, bounded on the south by M. Rhosus, which attains an average height of 5000 feet, and terminates rather abruptly in the *Gibel Kheserik* and *Ras Khynzir*. At the northern foot of the Rhodus are an antient aqueduct and many ruins.—*Journal of the R. Geographical Society*, Vol. viii., p. 185.

BAY of ORONTES.—(Vol. ii. page 254.) This bay, a slender indent of the coast, in the Pashalik of Aleppo, has been described by Mr. D. H. *Senhouse*, R.N., from whom we learn that the bottom of the bay is a straight line of sandy beach, 10 miles in length: at the north end it forms an elbow with Cape Khynzir, and at the south part, before which is the most water, is another elbow, the coast trending in a south-westerly direction, and the beach thence S. by E. Excepting off this beach, and in a cove within *Rasel Baseit*, the southern extremity of the bay, the coast is every where steep-to.*

The soundings off the mouth of the river are from 3 fathoms, at about two cables' out, to 5, 7, 8, 14, and 18 fathoms: thus extending about a mile from the beach, beyond which the depth abruptly increases, and no bottom is to be found at the depth of 100 fathoms: along the whole extent of the beach the soundings are nearly the same, the depths above-mentioned running in regular lines, parallel to the shore.

The anchorage is quite exposed to the westward, from which quarter it blows in the greater part of the year, and in winter with great violence, which is shown by the height at which the water-mark has been left. These gales bring in a heavy swell, which, from the shelf-like nature of the bottom is rendered tumbling and uneasy. The hull of a fine Egyptian brig lay stranded on shore, having been caught in one of them two winters before.

The best anchorage appears to be about three-quarters of a mile off the river, as the current from it lessens the strain on the cables, and as its effect does not extend more than six inches beneath the surface, the sea by it is not rendered more turbulent there than in any other part of the coast; but, as it would also take a ship over her anchors when the wind is not in, it will be better to moor.

At the mouth of the river is a bar, on which the general depth is not more than three feet, and a surf breaks over it, which it is often impossible to pass. The water from the river is good and fit for use. The river empties itself by *one mouth*, less than half way from the south end of the beach, and two miles to the southward of a mausoleum, which will always

* The southern horn of the Bay trends inward E. by N., about seven miles, to the beach. Near its outer extremity is a break or fissure called *Kasab*, and three miles nearer to the main land another, rather larger, *Kara Mayor*, which has good anchorage off it, close to the shore. The present estuary of the Orontes is four miles N. by W. ½ W. from the foot of *Mount Cassius*. What is called the custom-house stands E. by S. about a mile from the bar, and the antient port of Antioch is about a mile farther.—*Col. Chesney: Journal of the R. Geog. Society*, Vol. viii., page 229.

be a good mark, as it is constantly kept whitewashed by the inhabitants. There are several villages in the valley of the Orontes, the principal of which is *Soudiah*, (described in page 254,) and from these stock may occasionally be had, but bullocks are small and scarce.

There can be no difficulty in making the anchorage. The high and remarkable land in its immediate neighbourhood, *Mount Cassius* (otherwise *Gibel Okrab* or *Bald Mount*) on the south side, rises to the height of 5620 feet, and terminating in a sharp peak, can never be mistaken; toward the top it is grey and bare of trees, from which it derives its name. Mount Khynsyr is also remarkable land, and may be seen afar off.

The coast southward, between *Rasel Baseit* (above-mentioned) and Latakia is likewise well marked. The point *Rasel Baseit* is low; more than half way to Latakia is a long white cliff, which shows well: a little to the northward of this is a high bluff, of a dark red colour; about a mile to the southward of *Rasel Baseit* is a remarkable table mount; and a little to the southward of this, again, is another of a conical shape; neither of these is very high, but, rising immediately from the sea, they are remarkable. The last-mentioned is the higher of the two. There is a bay between the white cliffs and north point of Latakia, but the water is deep.—*Nautical Magazine*, December, 1835.

LATAKIA or LADIKIEH.—(Vol. II. page 255.) The Roadstead of Latakia is formed on the North by a very low and dangerous spit of sand, having from 3 to 12 feet over it, and on the South by the headland named *Cape Ziaret*, to the N.E. (not S.E.) of which is the town. The shoal on the north side should not be approached without the utmost caution, as it cannot be distinguished at night, and the lead, on advancing, is not to be depended on.

Sir John Franklin says that, on approaching Latakia from the N.W., the first indication of it is some wooded land, which appears like an island, at the distance of 12 or 14 miles. The mosque and its lofty minarets, built on the summit of this high land, are next seen; then some other minarets; and at length the lower land rises to the view, which terminates at Cape Ziaret. The old castle and the magazines at the scala or landing place of the inner harbour are just then visible, to which the course may be directed if you have clearly made out the low sandy point, and are at the distance of three or four miles from it. The *Rainbow* passed this point at the latter distance, and, when it bore N.E., gained soundings in 17 fathoms, and found the water to decrease gradually on advancing. The ship anchored in 12½ fathoms, with Cape Ziaret bearing S. 43° E., the old castle at the entrance of the inner harbour S. 62½° E., the low sandy point N. 8° 20' W.; the extremities of distant land to the South S. 7° 40' W.; and to the North, Cape Possidi N. 10° 31' E.; the minaret at the Scala S. 63° E.; the minaret on the large mosque on the hill S. 74° E. Distance from the landing place in the inner harbour 2½ miles; from the low sandy point 3½ miles; and two miles from the nearest shore. This anchorage is completely exposed to the winds from South to N.W. by the West, and consequently to the sea-breezes, which invariably throw in a heavy swell.

In the situation above described a ship would have sufficient room to cast either way, and make sail even in a gale to which she could carry canvas; but the anchorage seems very wild if not unsafe.

The Inner harbour is protected by piers and piles of stones, and is a safe place for vessels drawing 12 or 13 feet of water. When the swell is almost constant outside, such vessels must often have to wait for an opportunity to get either in or out.

Latakia is a walled town, with about 8000 inhabitants, including the residents at the Scala. The Christians amount to about 1500. It is not a good place for supplies of any kind for ships, but beef, mutton, and poultry, may be procured, at a high price.

In sailing along the coast to the southward, the town appeared more distinctly from that direction, and at a greater distance, than from the N.W. Hence, no doubt originated the error as to position. The Latitude of the *Rainbow's* anchorage, given as 35° 48', does not, we apprehend, exceed 35° 31'.

Although Latakia has not become the seaport of Aleppo, Iskenderoon being preferred, several vessels, English and others, have brought hither general cargoes to be conveyed by canals, &c., to Aleppo, a route of five days.

On the *Rainbow's* proceeding southward, the Castle of Markab, in lat. 35° 9', and the town and fortress of Tortosa in 34° 50½' were seen.

Mr. Senhouse has noticed that the little Bay of Latakia, formed by two low points, about

about $3\frac{1}{2}$ miles apart, is better than a mile and a half in depth; though exposed to the westward, he says the ground is good, (clayey sand) the soundings regular and clean all over: between the points 12 and 11 fathoms, gradually shoaling to 5 fathoms at about 300 yards from the bottom of the bay: toward either point the soundings are not so deep, but they lessen gradually.

Water is not to be obtained here without some difficulty: the only way seems to be by rolling it in casks from a fountain at the Marina in the port, which is capable of holding and giving good shelter to eight or nine small vessels, not drawing more than 11 or 12 feet: it has 4 fathoms at the entrance, but on one side, on which stands the old castle, are some large blocks, which have fallen from that building; all the beach is sandy, and convenient for hauling the sein.

Caution on approaching toward night is particularly requisite; for the points being low and backed by high ground, their existence is concealed until within a short distance from them.

BEYROUT.—The description of Beyrout, as given in vol. ii. pages 257, 8, is, of course, to be understood as it existed some years anterior to the late hostilities. The memorable attack of the allied forces, in the month of September, 1840, which caused its partial destruction, has been admirably described by an eye-witness,* who adds as follows:—

“The harbour of Beyrout is formed by a range of bold mountains; the Anti-Lebanon range rising about a mile from the shore, and running in a crescent from N.E. to West. The area from the sea-shore to the base of the mountains is covered with rich plantations of orange, lemon, mulberry, olive, and palm, trees; and it looks like one large and highly-cultivated garden, thickly studded with villas and hamlets, varied here and there by the snowy belfry of a convent, or one of those solitary minaretted tombs of Sheiks which form such a sombre feature in Eastern scenery. The town itself lies at the southern extremity of this harbour, and, seen from a little distance, embedded in deep verdures, has a very picturesque effect. As a place of defence, however, you might as well think of defending Broadstairs from the Channel fleet as Beyrout from a single ship of the line. It possesses, at the same time, an amazingly strong fortress, built, like so many of the sea towns of the Levant, up an acclivity, the summit of which is unoccupied. The range of hills is too distant to be available for the defences of the town, so that it lies completely exposed. Such is Beyrout.”

H. M. S. *Rainbow* in 1833 came to an anchorage in front of the town, in 12 fathoms, at about a quarter of a mile from the landing place, but found the ground to be rocky and covered with long weeds, therefore bad for holding. In veering cable the ship passed over a ledge of rocks, having only 10 fathoms over it, while the anchor and ship were lying in 12 fathoms. The cable became entangled with this ridge, and the ship, after the first day, never rode at the whole scope of the cable.

The breeze set in strongly from the N.N.W., and brought such a heavy swell soon after the ship anchored that she could not change her position. The better anchorage would have been half a mile to the S.W., in 15 or 17 fathoms, with the castle at the landing place bearing S.S.E. or S.E. by S. with the town not entirely open. After the autumnal equinox, ships prefer going into St. George's Bay, where there is better anchorage. The Bay of Beyrout is, at all times exposed to winds from North to W.S.W., but shelter from S.W. winds may be found in St. George's Bay, and in either of the two bays from S.E. which blows off the land. There were several batteries fronting the sea, with a few guns mounted, and two or three fortified towers facing inland from the town. The number of inhabitants stated, only 8000; Christians and Turks nearly equal, and a few Jews.

From the *Rainbow's* anchorage the outer rocks lying off the point of St. George's Bay bore S. $76^{\circ} 20'$ E. or nearly E.S.E. $\frac{1}{4}$ E.; the tower on the same point S. $65^{\circ} 40'$ E.; and the highest part of Mount Lebanon N. 85° W. or nearly E. $\frac{1}{4}$ N. *Naut. Mag. May, 1835.*

SYRIA and EGYPT, in general.—In a recent communication from SYRIA (July 1840,) it has been noticed that, “As the autumnal equinox approaches, the coasts of Egypt and Syria become dangerous lee-shores, which forbid the proximity of a blockading force for weeks together. Violent gales set in, then die away for a few days, and again return with

* A correspondent of the ‘Morning Chronicle.’

force sufficient to render it prudent for vessels, however sea-worthy, to seek safety elsewhere, and if possible to retreat to the anchorage of Vourla, Malta, or some other harbour for the winter. This intermittent season of storm and sunshine continues until the month of March, and impedes all hostile operations by sea on the several coasts.

The NORTHERN COAST of AFRICA.

The following Table of the positions of points on the coast of Algier, &c. is given from the "*Description Nautique des Côtes de l'Algérie*, by Captain A. Berard, with the *Notes* of M. de Tesson; Paris, 1837; and may be compared with the Table which follows, from former authorities.

The Surveys of Captain Berard, made by order of the French government, comprise the coast from the Zaffarine Islands, in $2^{\circ} 26'$ W. to Cape Serrat, in $9^{\circ} 12'$ E. The charts, truly said to be admirably executed, consist of a general chart in two sheets, five special charts, and six plans of islands and anchorages; as shown in a notice given in the Journal of the R. Geographical Society, Vol. vii., pages 409, 10.

In allowing for the difference of meridians, we assume the Royal observatory at Paris, as lately settled, in $2^{\circ} 20' 22''$ E. of Greenwich.

	Latitude N.			Longitude W.		
	35°	3'	3"	2°	35'	34"
Peuch; pointed summit of a very remarkable mountain ...	35	3	0	..	2	25 48
Zaffarines or Zaphran Isles; summit of the middle isle....	35	8	47	..	2	25 34
Cape del Agua.....	35	6	10	..	2	10 38

Cape Hone; northern extremity	35	8	20	..	1	49 38
Mount Noeh; the summit	35	8	0	..	1	40 53
Islet Areschquol; highest point to the north	35	19	37	..	1	28 37
Cape Fegalo or Figali; summit.....	35	34	18	..	1	10 18
Habibas; summit of the larger islet	35	43	28	..	1	7 31
Cape Falcon; eastern side	35	46	25	..	0	47 4
Mers el Kebir; Light-tower	35	44	21	..	0	41 3
Abuja or Aguja Rock	35	53	25	..	0	27 46
Cape Ferrat; small summit	35	54	20	..	0	22 30
Arzew; flagstaff of the fort.....	35	51	39	..	0	16 59

	Latitude N.			Longitude E.		
	35	55	57	..	0	5 36
Mostaghanem; the fort	36	6	2	..	0	11 59
Cape Ivi; N.E. point.....	36	10	40	..	0	19 42
Low Point (Pointe Basse)	36	19	6	..	0	39 32
Cape Hagmiss; marabout	36	26	20	..	0	55 57
Colombi or Palomas Islet.....	36	30	0	..	1	20 12
Tenez; mosque in the town	36	32	45	..	1	22 52
Cape Tenez; [Ras Nakkous] the summit.....	36	35	43	..	1	51 52
Aschak Rock; a little above water	36	36	48	..	2	12 3
Zarzel or Scharchel; fort on the peninsula.....	36	38	57	..	2	21 17
The islet Barinshel to the west of Ras el Amusch	36	34	38	..	2	33 41
Kouber el Roumyah; tumulus	36	45	52	..	2	50 59
Sidi Feruche or Ferouge; the tower.....	36	47	20	..	3	4 32
ALGIER; the Light-tower.....	36	48	36	..	3	15 17
Cape Matifou; summit	36	55	20	..	3	55 12
Dellys; the marabout	36	55	40	..	3	53 50
rock to the N.W.	36	54	0	..	4	9 52
Cape Tedeles or Tedlès; summit	36	53	45	..	4	27 50
Mers el Fahm; summit of the Cape.....	36	52	0	..	4	46 7
Cape Sigli; summit.....	36	49	45	..	4	59 55
Isle Pisan; western extremity	36	46	34	..	5	4 58
Bougia or Bujeya; Mount Goureyah, near Cape Carbon ...	36	41	19	..	5	27 59
Mansouryah Isle; summit	36	46	57	..	5	34 44
Cape Cavallo; conical summit	35	50	50	..	5	38 16
Salamander Shoal, to the N.E. of Cape Cavallo	36	49	54	..	5	44 45
Jijeli or Zejelli; the mosque.....	37	6	20	..	6	25 57
Cape Bougaroni; north point						

Kolah

	Latitude N.		Longitude E.	
Kolab or Collo; mosque.....	37	0 40 ..	6 32 49	
Isle Kolab or Collo	36	57 43 ..	6 41 42	
Isle Serigina or Stora	36	56 18 ..	6 52 52	
Cape Filfillah; the rock.....	36	55 15 ..	7 6 17	
Cape Ferro [Ras Hadeed]; islet	37	5 5 ..	7 9 53	
BONA; minaret of the hospital.....	36	53 58 ..	7 46 3	
Ras el Hamrah or Cape Guardia; ruins	36	58 4 ..	7 47 1	
La Cala (Calle Française); the mill	36	53 55 ..	8 26 22	
Sorelli Shoal or Reef	37	23 55 ..	8 36 52	
Isle Tabarea; North point nearly	36	57 59 ..	8 45 35	
Isle Galita; Eastern peak	37	31 14 ..	8 56 52	
Cape Negro; highest summit (<i>in Tunis</i>).....	37	5 20 ..	8 59 28	
Ras al Munshihar or Cape Serrat; the Hillock	37	14 0 ..	9 12 30	
Fratelli Rocks; the largest	37	18 6 ..	9 24 16	

The **HIABEEBA**, properly **HIABIBAS**, mentioned in page 187, are found to be two elevated rocky islets, six miles to the N.W. of Cape Sigale. They are surrounded by a great number of insulated rocks, extending in an E.N.E. and W.S.W. direction. The larger isle is that to the S.W., and the rocks in that direction extend from it to the distance of a mile. Occasional shelter may be found to the S.E. of the larger isle, where the depths are from 9 to 14 fathoms, bottom of gravel, but the ground, in general, is rocky and bad.

MUSCLE ROCKS.—At a mile and a half to the N.N.E. of Cape Sigale are three steep and low rocks, lying off the middle of a sandy bay to the eastward of the cape. They appear black, being bordered and covered with muscles.

PLANE ISLE.—Opposite to the middle of the large bay (Aguadas) formed by the coast between Cape Lindles and Cape Falcon, and at three miles to the north-eastward of the former, is the low and flat islet bearing the name of *Plane Isle*. It has three small summits of nearly equal height, is bordered with rocks, but boats occasionally find shelter between them. The islet serves as a refuge for sparrow-hawks, which nestle and breed here. The western part of the land of Cape Falcon, which is low, bears hence E.S.E. $3\frac{1}{2}$ miles.

On the *eastern* part of Cape Falcon, which is at a mile and a quarter from the western point of the same, is a hummock, considerably higher than the land about it, by which it may be known. The land between forms a slender cove. From Cape Falcon to the north point of the Bay of Oran the bearing and distance are S.E. $\frac{1}{4}$ E. 5 miles; and hence to the extremity of *Mers-el-Kebir*, the distance is only half a mile.

BAY OF ORAN.—(*Page 187.*) A NEW LIGHTHOUSE has been established on the Fort of *Mers-el-Kebir*, the elevation of which is 118 feet, and the light may be seen to the distance of nearly five leagues. It is furnished with eclipsers, but the eclipses do not appear total within the distance of between one and two leagues. The high land to the westward of it is 1040 feet in height above the level of the sea. At the bottom of the Bay, three miles to the south-eastward of *Mers-el-Kebir*, is the town of **ORAN** or **WAHARAN**.

ORAN, once large and populous, is now inconsiderable and inhabited by a few thousand persons. It stands partly on the sea shore, at the mouth of a spacious ravine, and partly on two table lands lying on either side of the ravine. The appearance of it is very pleasant; the streets wide and straight, and comparatively cheerful. The ravine divides the upper town into two portions, which is connected by a pretty stone bridge of Spanish construction. The stream is perennial, and strong enough to drive several mills. A handsomer valley than this, between two parts of a town, can hardly be imagined. On each side of the stream are terraced or sloping gardens, rich with fruits and flowers, and resounding with song-birds, among the peach, almond, and orange, trees around.

The Castle of Santa Cruz, on the summit of Mount Ramerah, is 1750 feet above the level of the sea, on the nearest top of the range of hills that sweep to *Mers-el-Kebir*, at which point there are equally magnific Spanish fortifications, together with the minarets of several mosques, &c.

The Spaniards resigned Oran to the Moors in 1791, after they had held it more than a hundred years, and had spent millions sterling of money to render it impregnable. But the earthquake of 1790, in one fatal night, buried thousands of the inhabitants under the ruins of their houses, and though the forts were not irreparably shaken, the Spaniards consigned Oran and its province by treaty to the Dey of Algiers.

The

The new Kasaba or castle, which is on the western side, has handsome ramparts, batteries commanding the sea and the town, a deep ditch with a counterscarp, and the remains of a covered way. Here are barracks for 500 infantry and 200 cavalry. In all the courts there are fountains and jets-d'eau. (*Mr. Campbell, "Letters from the South,"* 1836.)

Merchant-vessels, in the fine season, anchor before Oran in 7, 6, and $3\frac{1}{2}$ fathoms, sandy bottom : with N.E. winds they are incommoded by the swell, but the anchorage is protected from West and N.W. winds by the point of the *Fort Lamouna*, formed by land which rises thence abruptly toward the interior, and on which stand the forts of S. Gregorio and Sta. Cruz : almost inaccessible and near the sea.* The highest of these, (Sta. Cruz) which may be regarded as almost impregnable, may be seen at a great distance. The landing place is between Fort Lamouna and the city ; but landing is hardly practicable during fresh winds from the N.E., even in the fine season.

Point Canastal, the N.E. point of the Bay of Oran, bears from the extremity of Mers-el-Kebir East (by comp.) seven miles. Inland, at three miles *true East* from this point, is the summit of the *Mountain of Lions* or of *St. Augustin*, which rises to the height of 2017 feet above the level of the sea.

CAPE AGUJA or ABUJA, frequently described as Cape Ferrat, lies at the distance of seven miles N.E. $\frac{1}{4}$ E. from Point Canastal, and may be readily known by its figure and height. The coast between forms a bay, frequented only by the coasters, but there is anchorage, in 12 fathoms, sandy ground, off the foot of the Lions' Mountain, which, from its height and situation is very useful as a land-mark on making the coast.

The cape Abuja is formed by a pile of steep and barren rocks, which terminate in a pointed summit. At a mile to the eastward from its extremity, and a cable's length from shore, is a pyramidal rock, called by Europeans the *Needle*, and by the natives *Seba Pharaoh*, or Thumb of Pharaoh : it is 177 feet in height ; at a distance looks like a church steeple or a sail, and has several small rocks at its base. The ridge of mountainous land, trending from the cape, south-eastward, rises to the height of 2050 feet.

CAPE FERRAT, (proper,) a high, steep, and rocky headland, is four miles eastward of the Needle, and *Cape Carbon* is two miles *true East* from Cape Ferrat : it is distinguished by a hummock, and several insulated rocks at its base. From *Cape Carbon* to a little islet, which marks the N.W. extremity of the Bay of Arzeu, the bearing and distance are S.S.E. $\frac{1}{4}$ E. $3\frac{1}{2}$ miles : and, at less than a mile to the S.S.W. of the islet is the Fort Point of *Arzeu*, opposite to which and some magazines, half a mile more to the west, is the best anchorage, having from 4 to 2 fathoms, gradually decreasing to the shore.

Between the islet above mentioned and the Fort Point there are numerous broken rocks along shore. There is also a rock, 7 feet under water, at the distance of a cable's length E. by N. from the islet of Arzeu, which requires caution ; and another, partly above water, extending to the same distance south-eastward from the Fort Point.

ARZEU.—(*Page 188.*) *Arzeu*, the *Arsenaria* of the Romans, is now a small and miserable village. A few new houses have been built by the French settlers, two of which supply the military with wine and brandy. The port is frequently visited by European shipping, as a place of retreat in winter and autumn. The Bay offers excellent anchorage in all seasons for ordinary merchant-vessels, and in general for all under the size of frigates, near the shore, and large ships may anchor farther out in from 5 to 7 and 8 fathoms, bottom of sand, but are safe in fine weather only, being here exposed to the easterly and N.E. winds, which produce a great swell.

On coming in, the soundings are regular, and shoalen gradually toward the shore. The greater part of the Bay on the west is bounded by a sandy beach, with large clots of seaweed, which may be mistaken for rocks. At the bottom of the Bay is a river, (*Habrah*) discharging itself into the sea, and which receives several tributary streams : one of them is the *Wed-el-Hamam*, or River of Baths, so called from a warm spring in the neighbourhood.

Corn in considerable quantities, with cattle, wax, and oil, are the exports from Arzeu. The country here appears fertile, and there are many trees on the coast, so that both wood and water may be obtained.

* The two forts, bearing S.W. by S., form an excellent mark for entering.

**MAGNETIC BEARINGS, and the DISTANCES, of the PRINCIPAL POINTS
between ARZEU and CAPE MATIFOU, according to the late Survey.**

	Magnetic.	Miles.
Fort Point of Arzeu to Point Missigran	E. $\frac{1}{2}$ S. —	17
Point Mostaganem or Mostagan	East —	19
Point Schelef	E. $\frac{3}{4}$ N. —	23
Point Schelef to Gibel Iddis or Cape Ivi	N.E. by E. $\frac{1}{2}$ E. —	5
Cape Ivi to Point Basse, or Low Point	E.N.E. $\frac{1}{2}$ E. —	8
Point Basse to Cape Hagmiss	E. by N. —	18
Cape Hagmiss to Colombi or Palomas Isle	E. $\frac{3}{4}$ N. —	14 $\frac{1}{2}$
Colombi Isle to Cape Nakkous or Tenez	East —	22
Cape Nakkous to Ras Wahryah	E.S.E. $\frac{1}{2}$ E. —	14
Ras Wahryah to Point Zarzel or Scharchel	E. by S. —	27
Point Zarzel to Ras el Amusch or Hamous	E. $\frac{3}{4}$ S. —	9 $\frac{1}{2}$
Ras el Amusch to Sidy Feruche	East —	22
Sidy Feruche to Ras Akkonadda or Acrata	E.S.E. $\frac{1}{2}$ E. —	4 $\frac{1}{2}$
Ras Akkonadda to Point Pescada or Cape Caxiue	E.S.E. $\frac{3}{4}$ E. —	5
Point Pescada to Cape Matifou	E.S.E. —	10

CAPE MISSIGRAN may be considered as the outer or N.E. point of the Bay of Arzeu. At 2 $\frac{1}{2}$ miles from it, inland, eastward from the point, is the little town of Mostaganem, standing on the heights at a mile and a half from the sea, upon the borders of a ravine, at the bottom of which is a rivulet. It is defended by a fort, which is a good land-mark from the offing.

The Anchorage of *Mostaganem* is more to the north. The cape of the same name terminates a sandy beach which extends thence two miles to the southward.

Proceeding northward we come to the high lands and river of *Schelef* or *Chellif*. The heights, which rise to the height of 740 feet, terminate with Point Schelef, in lat. 36° 4'. The mouth of the river is a mile to the southward of this point, and a shoal bar extends from it nearly two miles to the north-westward. At about two-thirds of a mile outward a portion of it is frequently dry at low water. The Schelef is the most considerable river of Algeria, both from its length, depth, and breadth. It bisects high mountainous land, and its valley may be readily known from the offing by those approaching from the west.

The next projecting point, to the north-eastward from Point Schelef, is *Cape Ivi*, having several rocks at its base, and distinguished only by its rising from the lower land about it. The *Point Basse* (Low Point) is formed by rocks nearly even with the water.

CAPE HAGMISS, in latitude 36° 19', lies between two rivers at the bottom of valleys, which may be plainly seen. At the mouth of the northern one is the village of *Hagmiss*, whence corn is at times exported. On the right of the second, upon the top of the cliff, is a marabout, which may be seen at a great distance. The most projecting part of the cape is a steep red cliff, which appears bright when the sun shines upon it, or from 3 p.m. till the evening. The other part of this coast seems dreary, being uncultivated, and destitute both of cattle and inhabitants.

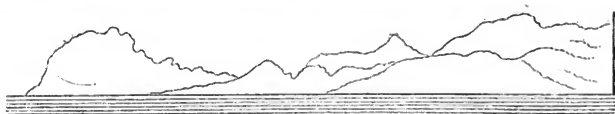
The islet COLOMBI or PALOMAS (Pigeon Isle) lies half a mile off the point called *Cape Gileto*, in latitude 36° 26'. It is 85 feet high above the sea, half a mile from shore, and takes its name from the great flights of pigeons which exist upon it. Vessels of moderate draught may pass between the islet and the land in the depths of 3 $\frac{1}{2}$ to 4 $\frac{1}{2}$ fathoms.

CAPE NAKKOUS or TENEZ is the most remarkable cape of this coast; it is formed by a great mass of steep rocks, which extend three miles from West to East. The summit of the cape is 2099 feet above the level of the sea. As the cliffs advance farther into the sea than any other point of this coast, the cape may be readily known.

The town or rather village of *Tenez* is about three miles to the S.W. of the cape, at the entrance of a river of the same name, and there are some rocks above water, near the shore; but there is shelter in the road before the town, from southerly, easterly, and E.N.E. winds, though quite exposed to all others. The best anchorage is in from 7 to 9 fathoms, with a saddle hill bearing about S.S.E.

After leaving Cape de Gat or the Isle Alboran, ships bound to Malta generally make Cape

Cape Nakkous. On a southerly bearing it seems shaped, with its perpendicular cliffs, something like a cock's-comb; but, on a S.E. bearing, it assumes a saddle shape. From the little isle Colombi it bears nearly East, seven leagues. At about 11 miles to the eastward of Colombi, near the water's edge, is a remarkable square yellow cliff, (like a castle, which appears to be bold-to: there is a small insulated rock between it and Colombi.



Cape Nakkous or Tenez, S.E. by E. $\frac{1}{2}$ E. [E. $\frac{1}{2}$ S.] 5 or 6 leagues.

The country hereabout has been noted for the production of corn, and the natives for their perfidious character. The interior ridge of mountains, extending nearly true East and West, are of great height, in one instance 3800 feet above the sea. They are frequently covered with clouds, especially with fresh easterly winds, but which are dispersed by those from the west. In several parts near the sea the land appears well cultivated.

At the distance of 25 miles to the eastward of Cape Tenez is a black rock, about two yards above water, which is known to the coasters under the name of *Aschak*. It is nearly a mile and a half from the nearest point of the shore, and particularly dangerous after sunset to steam-vessels bound either eastward or westward. On passing at two miles without the rock you may see a white marabout which stands on the opposite cliff, and to the left of the latter is a conical hummock, which seems detached from the land, and appears like an islet. The mountains of the interior continue very high.

The rock *Aschak*, as formerly noticed, was seen by Lieut. T. Baldock, commanding H.M. steam-vessel *Firefly*, on the 22nd of August, 1832, and again on the 21st of May, 1833. The islet seemed to be a cable's length across, covered with brushwood, having a sandy beach, but no appearance of shoal water about it. At about $2\frac{1}{2}$ cables on the outside of it a depth of 50 fathoms, and coral bottom, were found.

ZERZAHAL, or SCHERSCHEL, or CHERCHEL.—(Page 189.) This port, situate in a small cove, is 17 miles to the eastward of the islet *Aschak*. It admits small vessels only. The town, supposed to be on the site of the antient *Julia*, is very old, and its buildings, mostly of stone, are almost all surrounded by trees and gardens.

RAS el AMUCHE.—(Page 189.) From the outer point of Zarzel the course and distance to the cape *Ras el Amuche* are nearly E. by S. [E. $\frac{1}{2}$ N.] 10 miles. The lands which form the latter are high, in a considerable extent, and one mountain, (*Chenouah*) detached by an extensive valley from the interior mountains, rises to the height of 2780 feet; this, when seen from a distance, in an easterly direction, makes the cape appear like a peninsula. The country hereabout is inhabited, but the people are described as cruel and treacherous.

On the course above mentioned, and approaching the cape, you pass the islet *Barinchel*, lying off the most advanced point of the coast: this is a rock, 65 feet in height, with some vegetation upon it, at about a cable's length from the shore, and encircled with rocks. *Ras el Amuche* is frequently covered with clouds, particularly during easterly winds, which give it a gloomy aspect. During the fine season it is almost always enveloped in fog.

To the eastward of *Ras el Amuche* the land, declining in height, forms a bay, which affords good shelter from westerly winds, but is open to the north and east. At about eight miles to the S.E. ward of the cape, and two miles within the shore, is a hill, with an obtuse summit, upon which is a small structure in the form of a pyramid, at the height of nearly 1000 feet above the sea; this is an antient monument, called in the country *el Kuber Romeah*, (the Christian tomb,) held in great respect by the Arabs. It is an object easily recognized, in a situation well determined.* From *Ras el Amuche* the peninsula of *Sidy Feruche* bears E. $\frac{1}{2}$ N. (by compass) eight leagues. The *Ras Akkonadda* of the charts is the *Ras Acrata* of the late survey, and this point, about which are several rocks, is the

* It seems that the village *Tefessad*, to the S.E. of *Ras el Amuche*, is no more. A few ruins now mark the spot.

western extremity of the headland of Caxine, the elevated point of which is $3\frac{1}{2}$ miles more to the east.

ALGIER.—(Page 189.) The Bay of Algier, between the port and Cape Matifou, is eight miles in breadth. Since the possession of the port by the French colonists it is said to be considerably improved; and from November, 1834, an intermittent light has been substituted for the old fixed light on the mole; the flashes, which may be seen at a distance of five leagues, disappear regularly every half minute, but the fainter light does not entirely disappear within a less distance than $2\frac{1}{2}$ leagues. Elevation, 121 feet. Variation $19^{\circ} 25' W.$ August 1, 1832.

Mr. CAMPBELL, in his 'Letters from the South,' 1836, says, "The numerous villas in the vicinity of Algier, from their beauty and high position, give a magnificent appearance to this portion of the coast. The view of the city is interesting. It forms a triangle on the side of a hill, the base of which is close to the sea, while the apex is crowned by the Kasabah or citadel, which was the palace of the last Dey. The Emperor's fort, built by Charles V., commands the whole town. The terraced and square houses, which rise, seemingly condensed close behind one another, are, like the forts and city walls, all washed with lime and dazzling as snow. These objects, together with the pier and lighthouse, the batteries, lined tier over tier, with hundreds of great cannon, give an imposing aspect to the city, that seems to justify its old appellation of '*Algier the Warlike*,' but the streets are narrow and very dismal.

"By the census in 1833 the inhabitants were enumerated as 11850 Moors; 1874 negroes; 5949 Jews; 2185 French (excluding soldiers); and 1895 other foreigners. Total 23,753. Of the Turkish aristocracy not a rack is left behind. The *Kabyles* are the aborigine highlanders of the country, and they are distinguished by their superior form and figure."

The city is said to stand on the site of the *Icosium* of the Romans. Its present exports consist principally in wheat, barley, hides, wax, oil, ostrich feathers, and wool.

The Bay presents no secure anchorage in winter, for then the winds send in a heavy swell: but in the fine weather of summer, vessels may anchor as convenient at a mile or a mile and a half from shore, where the depths are from 14 to 22 or 26 fathoms, with oozy bottom. It will be prudent to use chain cables, as hempen may be injured by lost anchors. In 22 fathoms, large ships may anchor with the Light-tower bearing N.W. $\frac{1}{4}$ N.; the fort Babazoune W. $\frac{1}{4}$ S.; the fort l'Empereur W. $\frac{1}{4}$ N.; and a square house, seen over the bottom of the Bay, S.E. by E. $\frac{1}{4}$ E. The fort Babazoune is remarkable, being constructed on a rock near the sea.

There is also a good anchorage on the N.E. side of the bay, in 9, 11, and 13, fathoms, bottom of sand and ooze, where vessels may find good shelter from East and N.E. winds.

CAPE MATIFOU.—(Page 191.) On the meridian of Cape Matifou, at the distance of two miles from shore, is a rocky flat, of about five fathoms, one quarter of a mile in extent: but between it and the shore the depths are from 25 to 38 fathoms. At two miles to the south-eastward from the above, and nearly on the parallel of the cape, is a groupe of small dark-coloured rocks, named *Sandja*, which reach to a short distance from the shore. The most remarkable is about 28 feet high, above water, and at times appears like a sail.

At two miles true East from the *Sandja* is an insulated black rock, of a round form, and about fifteen feet above water. It is steep-to, and the water around it is deep.

At three miles farther to the S.E. and half a mile from shore, is another rocky groupe, named *Aguelli*, the highest parts of which are about 88 feet above water. The country boats frequently take shelter here. The space between the rocks and shore is free from danger.

According to the late survey, the magnetic bearings and distances between Cape Matifou and Cape Carbon are as follow.

Cape Matifou to Cape Bingut ..	E. $\frac{1}{4}$ S.	34 miles.
Cape Bingut to Cape Tedeles....	S.E. by E. $\frac{1}{4}$ E.	12
Cape Tedeles to Cape Corbelin..	E.S.E. $\frac{1}{4}$ E.	14
Cape Corbelin to Cape Sigli....	S.E. by E. $\frac{3}{4}$ E.	16
Cape Sigli to Cape Carbon	S.E. $\frac{1}{4}$ E.	17
(Variation 19° West.)		

The mountain *Beni Slim*, 8 miles to the S.E. of Cape Bingut, rises, like a volcano, to the height of 2755 feet above the level of the sea; that of *Beni-Abd-Allah*, four miles south from Cape Tedeles, rises to 3018 feet; that of *Azeffoun*, 5 miles to the S.W. of Cape Corbelin, to 4460 feet; and that of *Beni-Choudja*, 9 miles S. by E. from Cape Sigli, to 4137 feet.

The

The summits of the grand range, 6 or 7 miles south-eastward of the Bay of Bougia, rise to a greater height; even to 6200 feet.

On the coast, at the distance of a mile eastward of Cape Tedeles, is a dangerous reef extending to the shore, and there is another, at 5 miles to the westward of Cape Corbelin, with rocks above water to a mile from the coast. Within Cape Carbon, on the south, is the little town of Bujeya.

The N.E. part of *Cape Carbon* is composed of a great mass of bare rocks; the summit, *Mount Gourcya*, surmounted by a marabout, is 2870 feet above the level of the sea. In certain positions to the N.W. and S.E. the mount appears like a sugar-loaf, detached from the main land. The extremity of the cape is perforated by the sea, in a north and south direction, and it is hence called *Metsquob*, or the Pierced Stone.

BUJEYA or BOUGIA.—(Page 192.) Mr. Campbell, in his 'Letters from the South,' says that, On the 9th of January, 1835, before day-light, we anchored off *Bougia*, and early in the morning I went ashore, as the steamer always rests here for half a day, on its way between Algier and Bona. The harbour of this place is pretty spacious; but, like every other on the Algerine coast, it is insecure. The town itself lies on the slope of a hill considerably above the level of the sea. Its few streets, for it is now a miserable place, are steep and tortuous, but not so narrow as those of Algier. Poor as it is, it commands a glorious view of land and water; and even a portion of its own ruins is picturesque. But such is the grandeur of the surrounding mountain scenery that I drop my pen in despair of giving you any conception of it. The African highlands spring up to the sight, not only with a sterner boldness than those of Britain, but they borrow colours from the sun unknown to our climate, and they are mantled in clouds of richer dye. The farthest-off summits looked, in their snow, like the turbans of gigantic Moors, whilst the nearer masses glowed in crimson and gold under the light of morning.

"Bougia is at present little better than a mass of ruins, and among its houses there are still marks of the carnage that attended its last siege, in 1833.

"The town has still two forts to defend the harbour, and a third on the summit of a mountain behind it, which is 2011 feet above the level of the sea. At present, exclusive of the French garrison, it is supposed to contain about 500 persons only. Such is the condition of a place which, between four and five centuries ago was described by Leo Africanus as follows:—'Wonderful is the architecture of its houses, its temples, colleges, and palaces. Numerous are the professors of the arts; some of them are teachers of law; others of natural philosophy.'

"The native tribes in the territory, within the distance of 40 miles of Bougia, are 35 in number, and it is estimated that their men capable of bearing arms are 15,000, mostly cavalry.

"The Algerines, for the sake of their navy, were obliged to purchase timber from the woody mountains of this province, and to be their humble customers. The products of the country are oil, soap, dried figs, and above all, carpenters' wood; they also manufacture spades and plough-shares."

The little isle *MANSOURIAH*, near the shore, on the S.E. side of the Bay of Bujeya, affords shelter for small vessels. About *Cape Cavallo*, the north-easternmost extremity of the Bay, are several dangerous rocks.

The *SALAMANDER*, a shoal of 13 feet water, lies with Cape Cavallo [*Ras Djemel*] bearing S.W. by W. $\frac{1}{2}$ W. 4½ miles, and Point Jijeli S.E. by E. five miles.

CAPE BOUGARONI [*SEBA-ROUS* or *Seven Capes*.—(Page 192.) Under this name is comprehended a great mass of elevated land, 16 miles in extent from West to East, and the summit of which, seven miles from shore, is 3576 feet above the level of the sea. The coast here is generally bold and steep-to.

The BAY of KOLAH or KOLLO, to the S.E. of Bougaroni, affords good shelter for small vessels, with N.W. and westerly winds, and may serve with a fast on shore, before the town, with nearly all winds. The ground holds well, but N.E. winds send in a great swell.

CAPE FERRO [*Ras Hadeed*, page 192.] is formed by a mass of elevated, bare, and serrated, rocky land, bordered with rocks, above and under water. Two pitous or small peaks may be seen to the south, and appear as if insulated. The highest summit of the cape is 1574 feet above the sea. The distance from Cape Ferro to *Cape Mavera*, [*Ras el Hunra*]

Humra] the N.W. extremity of the Bay of Bona, is 29 miles, and in the interval are several rocks near shore.

BONA.—(*Page 192.*) BONA, as described by Mr. Campbell, is situate in a spacious bay, bounded on the west by Cape Guardia and on the east by Cape Rosa. The river Seibouze, joined toward the end of its course by the river Boojeeimah, the ant. Armua, falls into the sea within this bay, as well as the Mafrag, a river rather less than the Seibouze, which discharges itself half-way between Bona and Cape Rosa.

The town is built at the bottom of what the French call a *mamelon*, i. e. a nipple of land, the sides of which terminate in steep rocks along the shore; the city is enclosed by walls about 60 feet in height, pretty thick, but not backed with earth, and have the shape of a rectangle slightly inclined toward the valley of the Seibouze. This wall, though weak in some parts, is still capable of a good defence against the Arabs: its total circumference is 3400 yards. The town has four gates; one leading from the east to the harbour; another, called the Arab gate, leading to Constantina, and two that face the citadel. The Kasabah, or citadel, with a wall of 700 yards in circuit, crowns a high hill to the south of the city: this wall is so high and so thick, and so backed by the natural soil, that it would be difficult to make a breach in it; it is capable of cannonading the roadstead and the mouth of the valley, and it entirely commands the town: its interior is very large, and contains a number of cisterns.

On approaching the harbour of Bona, the shore presents a great and singular rock, to which nature has given such a likeness to a lion couchant that you remark the resemblance before being told that this is called the *Lion Rock*. The ruins of the antient city are spread over a neck of land that lies between two small rivers, having their influx together into the sea. This place was visited by Sir Grenville Temple, in September, 1837, who observes that the town was destroyed in 1832, but has been rebuilt; the streets have in several instances been widened and carried in straight lines. Many good houses have been constructed, and good shops, reading rooms, coffee-houses, restaurants, and even a theatre, established. *Journal of the R. Geog. Soc.* Vol. viii. p. 39.

From the cape or western point of the Bay of Bona, the magnetic bearing and distance to Cape Rosa are E.S.E. 21 miles. Cape Rosa is the extremity of high land, extending there in a true South direction, and to the height of 1082 feet. The cape itself, composed of perpendicular rocks, is 295 feet in height, and exhibiting at top a few bushes only. To the southward of the cape are two coves, wherein small vessels frequently take shelter, in order to wait for a favorable wind: but N.E. winds send in a very heavy sea.

COASTS of TUNIS and TRIPOLI.

CAPE CARTHAGE. (*Page 198.*)—A notice, dated Admiralty, 17th June, 1840, states that the Tunisian Government have erected a lighthouse on Cape Carthage, which will be regularly lighted every night, with a light revolving once in every three minutes.

CAPE BON. (*Page 199.*)—Under Cape Bon there is good anchorage, in 13½ fathoms, good holding ground, at a mile and a half from shore, with a remarkable rocky point, two miles S.E. of Cape Bon, bearing N.N.E. ½ E. one mile and a half distant; a marabout, standing about two miles inland, from the west shore of the bay, W.S.W. ½ W., and the south point of the bay south, about three miles.

TRIPOLI.—A general description of and directions for Tripoli are given in pages 201—203 hereafter, and piloting directions for this port have since been given by Captains the *Hon. R. S. Dundas* and the *Hon. F. W. Grey*, from which we make the following abstract.

H. M. S. *Belvidera*, Capt. Dundas, proceeded from the Archipelago to Tripoli on the 5th of July, 1832. On the passage, as commonly found in this season, the winds were commonly light and principally from the northward. On the 13th, in lat. 33° 30' and long. 13° 50' having run about S.W. by W. before sunset, high mountainous land was seen to the southward, which is at some distance within the coast; but the shore near Tripoli is low, and seldom seen more than twelve miles off.

In the evening the wind came round to the eastward, and the ship hauled more to the southward, sounding regularly on standing in for the land. At midnight tacked off shore, and stood off and on in from 60 to 40 fathoms, having indistinctly made out the coast by moon-light. At day-break nearly calm, with a thick fog, which lasted till 10 a. m. when the

the water had shoalened to 30 fathoms, and the fog suddenly clearing off, with a breeze from the N.E., the town was discovered, bearing S.E. by S., about four miles off. Steered directly toward it and anchored in 16 fathoms to the northward of the town, as shown by chart, with the round or French fort S. $\frac{1}{2}$ E. beyond half a mile from shore. Afterward shifted farther out, and anchored in 17 fathoms, with the same fort S. $\frac{1}{4}$ W., and the easternmost of the Harbour Rocks S.E. $\frac{1}{2}$ E. This is the safer berth, but commanders must be guided by experience and the state of the weather, as there is no shelter. Here was found a strong current setting along shore to the westward; and it was afterward found that the currents hereabout were very irregular and uncertain, according to the winds.

The winds upon the coast at this season are land and sea-breezes; but once or twice during a month that the ship remained here, fresh northerly winds prevailed, with a disagreeable swell. The land wind, which blows from the southward in the night, commonly draws round to the westward toward day-light in the morning; and, after an interval of calm, the sea-breeze sets in early in the day at N.E., drawing gradually round to East and E.S.E. in the afternoon, when it blows moderately fresh till sun-set. Fogs in the morning are not uncommon.

On another visit made by the *Belvidera* in the commencement of October, same year, the weather for the first ten days was fine, with the usual summer breezes; but toward the middle of the month an evident change took place, preceded by several days' rain; to this succeeded the constant N.W. and northerly gales which prevail upon the coast; and once in this month there was a very severe gale at N.E. The wind in the morning of the 25th (October) was moderate at West, and drew round, as is commonly the case, to N.W. early in the day. In the afternoon it began to freshen, and toward evening it came more round to the northward, till at midnight it was blowing a strong gale at North. Before day-light next morning it shifted to E.N.E., and backing afterward to N.E. by N., it blew a heavy and severe gale, with strong squalls and rain, which lasted two days. It then gradually moderated. This was almost the only instance of strong winds to the eastward of north.

In *November* the prevailing winds were moderate at West and N.W., varying sometimes off the land to the S.W. during the night, and in the morning. Once or twice they had dry hot southerly and S.W. winds, which lasted the whole day. Toward the end of the month there were several fresh N.W. and northerly breezes, with rain.

In *December* the winds were constantly between West and North, varying occasionally, in moderate weather, to the southward of west in the night, but blowing more frequently in steady strong breezes at W. by N., with clear cold weather; on other occasions it blew in strong gales, with squalls and rain, at N.W. and N.N.W.

In *January*, (1833,) the winds were more moderate than in December. Frequent light winds off the land at night, and variable moderate breezes in the day; but the usual West and N.W. winds were common in this month. In *February* N.W. and northerly winds were the most frequent; but, on the whole, the weather was moderate. Occasionally, in the latter part of the month easterly breezes prevailed during the day.

In *March* there were several strong gales from different quarters of the compass. On the 2nd and 3rd of the month the wind blew strong at N.W. On the 5th there was a fresh breeze at East, which moderated at night, and freshened again on the 6th at E.S.E., when it blew in heavy squalls from that quarter, till the 7th, covering the ship with sand and dust. It then moderated and shifted to West. On the 8th and 9th it blew a strong gale at N.W., and top-masts were consequently struck. Between the 10th and 19th the winds were variable, with fine weather; but, near the end of the month, strong winds from the westward occurred frequently, more than land-winds from the southward, and in the night shifted suddenly to West, in hard squalls, with rain.

The month of *April* was generally a fine month, with variable winds. Northerly winds and easterly sea-breezes were common, and dry siroc winds several times occurred.

H. M. S. Actæon, July 14 to August, 1832 :—"In running for Tripoli from the northward the *Terhoona Mountains*, which lie from 20 to 30 miles S.E. of the town, first became visible. Soon afterward the low line of coast to the eastward of Tripoli, well cultivated and thickly planted with date trees; to the westward, sandy and desert. This difference may serve to point out to a stranger the position of the town, which is not easily made out at a distance.

Captain

Captain Grey has said, "In standing in for the land at night, a ship should not approach nearer than in 20 fathoms, in order to avoid the Kaliusa Reefs (on the eastern side of the entrance,) which lie from a mile to a mile and a half off shore, and extend $2\frac{1}{2}$ miles to the eastward from the Harbour Rocks.

"In working-up from the eastward, a good mark for keeping to the northward of these reefs are the tower and trees of *Gargaseh*, a village about four miles to the westward of Tripoli, and standing alone in the Desert, kept open of the round fort,* standing on a detached rock under the north or sea-wall of the town. I have tacked with this mark in 16 fathoms. This anchorage in the winter I should consider a very insecure one, as the N.W. winds must cause so heavy a sea as to make it dangerous for a ship to remain at anchor, and difficult to work off. Even during our stay at this season, in two instances with very little wind, so much swell came in as to make communication with the shore very difficult. During the greater part of our stay we had regular land and sea breezes, the latter generally fresh from East and E.N.E.; the land-breezes S.W. and W. There was generally some current taking its direction from the wind, but very uncertain.

"On nearing the land by day the Harbour Rocks will be easily made out, and a stranger may stand boldly in, steering about half a mile to the eastward of the outward rock, until the mark for keeping to the northward of the Kaliusa Reefs comes nearly on. He will then without difficulty make out the English consul's house and garden, bearing S. 30° E. by compass from the outer rock. It is a dark-coloured house of two stories, (the lower one nearly hid by olive trees,) with five windows, the three central ones in a semi-circular projection. At the bottom of the garden is a small summer-house, and between it and the house a still smaller temple with a white dome, which is very conspicuous on entering the harbour.†

The *Leading Mark* in is, a black mark, on the N.W. corner of the consul's garden wall, on with the central window of the house above described: this leads nearly in mid-channel in from 5 to 7 fathoms.

The mark for the eastern point of the Harbour Reef is the same black mark on with the temple in the consul's garden (above-mentioned); this leads over the point of the reef in 20 feet of water. If kept half-way between the temple and house, it leads clear in 5 fathoms.

The mark for the western point of the *Kaliusa Bank* is, the summer-house on with the centre of the consul's house (as above) leads rather close in and in 4 fathoms.

"To run in, keep the leading-mark on until the highest part of the mole-fortification is open to the southward of the Harbour Rocks; you will then be inside the reefs, and may steer for the sultana's tomb, (two small square buildings with domes,) bearing nearly in one, about one-third of a mile to the westward of the consul's garden, until the temple comes on with the black mark. Beyond this a stranger should not go without a pilot, or without making himself acquainted with the channels which lead into the harbour, and in either of these cases anchoring is recommended, as he will then be in a very good berth, in from 5 to 6 fathoms outside the shoals, well sheltered from northerly or N.W. winds, and open only to the N.E., when the wind would be fair for running in.

The bottom throughout the harbour is of sand, with a slight mixture of mud and numerous beds of weed. Though not very good holding-ground it is by no means bad, and the *Actæon* never brought her anchors home. The depths are very irregular, particularly in the vicinity of the banks, but least so where the bottom is free from weed. The Tides vary with the wind, but there is a rise and fall of about two feet on the full and change. The landing in boats upon the southern shore of the harbour, in strong northerly winds, is often extremely dangerous, and great caution is required when the sea is seen to break on the Kaliusa Reef.‡

ALEXANDRIA.—(Vol. ii. p. 269.) The Harbours of Alexandria were re-surveyed by *M. le Saulnier de Vauhello*, captain in the French navy, in 1834, and for the Central Channel, otherwise the Boghaz, or Grand Pass, he gives the leading mark annexed.

* The French Fort.—Ed.

† This will be clearly understood by referring to Captain Smyth's plan of the Harbour of Tripoli.

‡ Marks for the passages within and between the reefs have been given by Captain Dundas in the *Nautical Magazine* of May, 1835, and by Captain Grey, in that of July, same year.

Boghaz Sand-hills, S.E. (magn.)*Marks for the Entrance of the Boghaz, or Great Passage to the Old Harbour.*

This channel is distinguished by the sea breaking upon a rock on either side of it. These rocks, called the *Kot* and *Fara*, are upon the inner edge of the outer banks. Should there be no sea, a boat should be anchored in the pass, in about 5 fathoms; thence hard to the southward of the northern rock, *El Kot*, until the marks are again in one; whence you may proceed up the Harbour to the N.E., as shown by the chart.*

THE VOYAGE TO AND FROM ALEXANDRIA.

The "Hints of a Voyager," to and from Alexandria, given in the 'Nautical Magazine' of December, 1836, are worthy of especial notice. The writer says that the best cargo to take to Alexandria is coals; and iron, with the precautions that he has prescribed, may be taken.

On the voyage out, if you have a chronometer, you may make the land about Cape Finisterre; and, with north-easterly winds keep the coast in sight to Cape St. Vincent, and shape a course for Cape Spartel, as in case of meeting an easterly or south-easterly wind, anchorage under the cape may be obtained. From the Strait you should shape a course for Cape de Gat; but when in the Mediterranean make no long tacks, never more than 25 miles from either side of your direct track, as the winds are too variable to allow an expectation of their continuance in any one direction, and the currents are influenced by the direction of the land as well as by the wind.

The port of Alexandria is spacious, and the approach by day is safe, as the water is deep close to the reefs. The Pasha's palace, Pompey's pillar, and the masts of the ships, are always visible before you approach danger. A stranger should attend to his lead, as the soundings are a *sure* guide. If the day is on the wane, haul off; do not lose time, and you make your vessel secure:—for should you obtain a pilot, (which is not likely, unless the weather be remarkably fine,) and get in, you will find that the custom-house, consul's office, and all other places, have long been closed.

*Pharallon.**Pharos, E.S.E. magn. a mile and two-thirds.*

Captains of merchant-vessels, before they leave England, should be regardful in signing Charter-parties, as by neglecting this their homeward bound freight will be charged a commission of $2\frac{1}{2}$ per cent. by the merchant to whom their outward cargo is consigned, and deducted from the freightage.

Owing to the late improvements water is easily obtained; but its free use is to be guarded against, as producing dysenteries, &c.: it is however very soft, makes capital tea, and washes well. Meat is obtained at the market at very reasonable prices, and the mutton though small is good. Pigeons and quails in season are plentiful and cheap, with vegetables, potatoes excepted. Commanders are advised to carry a sufficiency of salt provisions for their voyage home.

On leaving Alexandria, work up to Candia; the average summer passage to Malta is 22 to 30 days; in winter, from 18 to 25; but the vessels that have pursued the above-mentioned track have had the shortest voyages. To the southward of the isles of Lampedusa a current of one mile an hour, S.W. by S. by compass, was found by a trial in a calm evening. Vessels are recommended to pass the Esquerques by Cape Maritimo; as, in a fleet of seven vessels, those which came by Cape Bon lost some two, some three, days' time, from being embayed when the wind changed to the N.E., previous to its blowing a levanter or from east.

* The chart here referred to, exhibiting the new forts, &c., was republished at the Hydrographic Office, London, 1840.

Should the wind be contrary, make Sardinia; then work along the African shore to Algier; thence make and keep the Spanish shore until you sight the rock Gibraltar; with a westerly wind you may anchor behind the rock, and save the dues, which in quarantine are considerable.—Eleven dollars for anchoring, and expenses for guard-boats, &c.

Having passed Tarifa, Cape St. Vincent ought to be made; but caution is requisite, especially by night, in order to avoid the *Dædalus Rock*, (described in the Book of Directions for Spain and Portugal,) and which was seen by Capt. Neate, in the brig *Astrea*, of Belfast, who saw the sea breaking over it, and who described its appearance to be like that of a half-tide rock. From Cape St. Vincent, should the wind be north-easterly or northerly, stretch to the westward. "We reached 23° W., and was in port, (Milford Haven,) sooner than those which kept closer in shore." W. S.

STEAM NAVIGATION TO AND IN THE MEDITERRANEAN SEA.

The British steam-vessels, conveying the Indian mails *viâ* Marseille and France, take passengers with the mails, according to a scale laid down by Government. The passage is the most rapid in the Mediterranean. The *Alecto*, *Prometheus*, &c. generally make their passage in three days from Marseille to Malta, and from Malta to Alexandria in four days, and sometimes less; making the passage from London, through France, to Alexandria, in 13 or 14 days. These steam-vessels are capable of accommodating from 40 to 50 passengers, and afford most excellent accommodations. The *Prometheus* made her last voyage from Marseille to Malta, a distance of 645 miles, in 65 hours. The cabin passage, including every thing, is £9 sterling from Marseille to Malta, and £13 from Malta to Alexandria. The commanders are naval officers.—*Malta, 31st August, 1840.*

CONTRACT-STEAMERS TO ALEXANDRIA.—On the 1st of September, 1840, the first of the Oriental Steam Company's vessels, the *ORIENTAL*, of 1500 tons, and 450 horse-power, was to start from Southampton for Alexandria, touching at Gibraltar and Malta only, and carrying the Government mails and dispatches. She was expected to arrive at Malta on the 9th and at Alexandria on the 14th of September. The new line of steam-vessels, for the India-mails, are thenceforward to leave England for Gibraltar, Malta, and Alexandria, on the first of every month, and Alexandria for Malta, Gibraltar, and England, from the 20th to the 25th of every month, making the passage each way, under ordinary circumstances in fourteen days. A branch steamer will run twice a month between Malta and the Ionian Islands with mails, passengers, goods, and parcels. Each vessel will carry a medical officer, appointed or approved of by Government, and the time occupied in the passage home will be allowed in the quarantine. *Office in London, No. 51, St. Mary Axe.*

A large and powerful steam-ship is to be sent out to commence a line of communication between Calcutta, Madras, Ceylon, and Suez, in connection with the line to Alexandria. In the intermediate region, iron steamers are to be placed on the Nile, for the conveyance of passengers, &c., between Atfe and Cairo [Kahira] by which they will be enabled with certainty to reach the outward steamer at Suez, and the homeward steamer at Alexandria, as soon as the mails.

See, upon this subject, Mr. Osborne's "New Guide to Egypt, the Levant, and Syria;" a most useful and important volume, published in 1840, pages 93 and 105. For the Egyptian measures, weights, and moneys, the reader is referred to the same work, pages 133, 4, 5, 6.

View of Alexandria when the *Pasha's Harem* bears S. by E. $\frac{1}{2}$ E. one mile and a quarter, and *Fort Ada* S.E. $\frac{1}{2}$ E. (by compass.)



[References to Vol. II.]

In the months of May and June, 1840, CAPTAIN EDWARD SMITH, R. N. in the yacht *Menai*, belonging to Lord Francis Egerton, was on a cruise upon the coast of Syria, the result of which has been some useful sketches of the coast and harbours, with a sheet of beautiful views of the principal places. From a small book of 'Sailing Directions' which accompanies the work we derive the following information.

Commanders of vessels running up the Mediterranean, and bound to the coast of Syria, will do well to keep to the northward, and by doing so make the island Candia; or, in winter, even the island Cyprus, both of which are bold, and their south sides free from danger: A good departure may hence be obtained; on the contrary, by keeping too far to the southward, they may become entangled with low banks to the southward of Jaffa, (near the parallel of 32°) and embarrassed with currents and counter currents invariably met with in this sea, particularly during winter, when subject to the heavy N.W. gales, which affect all the Syrian coast from 32° to 37° N.

Of the WINDS affecting Currents along this coast the most prevalent are the westerly; for although in the summer these winds do not blow home, they throw in a very troublesome swell. It has been stated that the currents generally set to the northward, but this is not always the case. At BEIROUT a regular tide was observed, which set, on the full and change of the moon, at the rate of two knots an hour, and opposed to the direction of the wind, with a rise of three feet. At SEYDÉ, (ant. Sidon), more to the south, a rise and fall was also observed.

CAPE KHYNZYR, the S.W. point of the Gulf of Iskenderoon, is described in the preceding pages. The port of Iskenderoon, as already noticed, page xxv., is a swampy and sickly place, where merchant vessels discharge cargoes for Aleppo. It consists of a few huts, and the house of the consular agent. Schooners are mostly employed here, having one boat only, by which the whole of the cargo is discharged. Vessels lie in from nine to six fathoms at half a mile off shore.

BAY OF TRIPOLI.—(Page 256.) A ledge of rocks stretches to the northward more than a mile from the south point; and upon these a British schooner struck, and was damaged in 1840. Beyond this reef, at nearly the same distance, to the N.N.W., are three rocky islets. By hauling round to the northward of the rocks, a vessel may sail into the Bay in 10 or 12 fathoms, and come to an anchor off the town in 5 or 6; but the road is safe only during the summer season, as the winds are violent during winter, and blow home.

NAHR el KELB or DOG RIVER.—This river, described in page 257, is formed by an immense and magnificent gorge in the Lebanon. Its name is derived from a large rock, resembling a dog, formerly on an eminence at its southern entrance, but since fallen, and now washed by the sea; this, during heavy gales from the southward, breaks violently over it. The valley is beautiful, and the neighbouring Lebanon densely populated. The water of the river is excellent, and the best on the coast.

No boat should attempt to proceed up the river during a southerly swell, as the counter-action of the stream, running out with great force, renders it extremely dangerous; and it is then much safer to beach a boat on either side of its entrance than to pull direct for the river's mouth.

BEYROUT.—The Bay of Beyrout is described in pages xxviii. and 257. In St. George's Bay, at two miles eastward of the town is the anchorage mentioned by Sir John Franklin. Here is good ground in from 14 to 8 fathoms, rather more sheltered from the effects of strong northerly winds than the roadstead of Beyrout, with the advantage that should a vessel part from her anchors, or drift on shore during a gale, the shore being of sand, she may be got off again when the weather moderates; but as, in the road of Beyrout, the shore is rocky, and, at the point of the cape dangerously so, St. George's Bay is in winter, to be preferred: yet, in summer it should be avoided; the land being low and swampy, its exhalations produce sickness among those frequenting it, and its distance from Beyrout is inconvenient to unladen merchant-vessels. In St. George's Bay is the *Nahr el Sazib*, a pretty rivulet, mentioned in page 258.

In these roadsteads it is dangerous to lie during the stormy season of the year, and even in summer, at times, the swell is very troublesome; although the wind may not blow home, vessels are, by a rebound of this swell, termed an *under-tow*, frequently thrown athwart, with a dangerous roll.

On approaching Ras el Beyrout, from the southward, the coast may be known by its red and white sand hills. The red hills are very high, and the cape, at a distance, as noticed in page 258, appears like an island. It has some dangerous rocks about it, which must be carefully avoided; but, on opening the town, which cannot be mistaken, you may haul boldly in, and anchor in from 15 to 9 fathoms. (See the preceding page xxviii.)

The coast between Beyrout and Seydé or Sidon presents a pleasant aspect, and during all the fine season it may be coasted along within half a mile or less, taking an occasional cast of the lead in 8 fathoms, this being at a sufficient distance from shore. Off Seydé vessels may anchor in 6 fathoms, within an islet and reef of rocks, as shown in page 259, and which extend to the length of 240 fathoms.

BAY OF ACRE.—Cape Carmel is described in page 261, with the shoal extending from it, within which is the anchorage. Although off Acre the ground is foul, and vessels lie more exposed, they may generally, in summer, anchor along the whole line in from 12 to 10 and 8 fathoms. At Acre is a mole for the protection of the coasters. The castle on Cape Blanco has disappeared.

YAFFA or JAFFA, (page 262.) Captain Smith says that the sand-heaps to the north and south of this place present a most barren and dreary appearance; and he adds that, while to the southward, as far as the eye could descry, nothing but the white sand could be seen, and for two miles to the northward of the town the same appearance continued, only rising higher than the sands to the southward; then the red land commenced. The towers, said to be marks by which Jaffa might be known, were not seen; but the town, being situate on elevated land, cannot be mistaken.

Finally, as to the trade of Syria, British manufactured goods are not only in request but eagerly sought for: and, if a just government be established, commerce will flourish here.

“Spanish pillar-dollars should be named in each charter-party at the sterling value they bear in England at the time the vessel sails; and the agents at the sea-ports to pay the amount in 48 hours after the cargo is landed, giving time for the vessel to prepare for sea.” Thus the master will be free from the perplexity arising from the various coins which may be current here.

In May and June, 1840, Captain Smith found the highest temperature of the air off the Syrian coast,—in the shade 90°, in the sun 115°. General average of temperature, in the shade, 67° to 74°. Water, at 7 fathoms, 64°; at one fathom, 67°. Near the close of May the weather was excessively hot during easterly winds.

ERRATUM.—In page xxxix., line 4, for *hard* read *haul*.

In page 121 should be inserted, ‘On **CAPE STA. MARIA**, opposite to the eastern coast of *Samos*, and at the foot of the Peaks of *Mycale*, there is now a tower which exhibits a bright fixed light.’

NAVIGATION OF STEAM VESSELS.

Trinity House, London, 30th October, 1840.

THE attention of this Corporation having been directed to the numerous, severe, and, in some instances, fatal, accidents, which have resulted from the collision of Vessels navigated by STEAM; and it appearing to be indispensibly necessary, in order to guard against the recurrence of similar calamities, that a Regulation should be established for the guidance and government of persons entrusted with the charge of such Vessels; and,

Whereas the recognized Rule for Sailing Vessels is, That those having the Wind fair, shall give way to those on a Wind :—

That, when both are going by the Wind, the Vessel on the Starboard Tack shall keep her Wind, and the one on the Larboard Tack bear up,—thereby passing each other on the Larboard hand :—

That, when both Vessels have the Wind large or abeam, and meet, they shall pass each other in the same way on the Larboard hand, to effect which two last-mentioned objects the Helm must be put to Port :—

And, as Steam Vessels may be considered in the light of Vessels navigating with a fair Wind, and should give way to Sailing Vessels, on a Wind, on either Tack, it becomes necessary only to provide a Rule for their observance, when meeting other Steamers, or Sailing Vessels going large :—

Under these considerations, and with the object before stated, this Board has deemed it right to frame and promulgate the following Rule, which, on communication with the Lords Commissioners of the Admiralty, the Elder Brethren find has been already adopted in respect of Steam Vessels in her Majesty's Service, and they desire earnestly to impress upon the minds of all persons having charge of Steam Vessels, the propriety and urgent necessity of a strict adherence thereto, viz.

R U L E.

When STEAM VESSELS on different courses must unavoidably or necessarily cross so near, that, by continuing their respective courses, there would be a risk of coming in Collision, each Vessel shall put her HELM TO PORT, so as always to pass *on the LARBOARD side of each other.*

A STEAM VESSEL passing another in a narrow Channel, must always leave the Vessel she is passing *on the LARBOARD hand.*

By Order,

(Signed)

J. HERBERT, *Secretary.*

[*Turn over.*]

STEAM BOAT EVOLUTIONS.

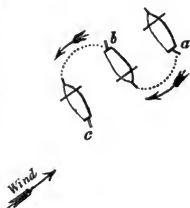
As every particular relative to the navigation of STEAM-VESSELS has become peculiarly interesting, and cannot be too generally known, we offer no apology for giving the following extracts from the *Nautical Magazine* of February, 1840. They are intended for the use of those who may, hereafter, serve in steamers; for, 'with a knowledge of the line traced when going stern foremost, a commander may turn his vessel with certainty (provided the wind is favorable and there be no tide,) in twice her own length, without the assistance of a rope.'

REMARKS ON THE EVOLUTIONS OF A STEAM-VESSEL, BY MR. ROBERT C. ALLAN, of H.M. STEAM VESSEL VOLCANO, OCTOBER, 1839.

Having been upward of three years in steam-vessels, I have had many opportunities of observing what may be done in them, with regard to turning them round in a short space. Every one acquainted with the management of a steamer knows what can be done when going ahead; but not so when going 'back-turn:' for many persons serving in steam-vessels are unacquainted with the following facts.

Suppose a steam-vessel to be lying-to, under bare poles, on the larboard tack, with a breeze, of which the strength is from 2 to 6,* she will lie-to with the wind a little abaft the beam, as at *a* in the figure.

Put the helm a-port, and give her a back turn, and she will always come up with her stern to the wind. If the wind be light, say 2 or 3, she will generally come right round, and nearly to the spot from whence she started. If the wind be strong she will not come round until she brings it on the starboard beam, as at *b*; and then, notwithstanding the helm being shifted to starboard, as indicated by the double line, she will again present her stern to the wind and attain the position *c*.



The manner in which the writer endeavours to account for the anomaly is this:—

There are two forces, the wind and the paddle-wheels. If the wind acts equally on the fore and after parts of the vessel, and the paddle-wheels send her directly astern; then, by the resolution of forces, she will move along the diagonal of the parallelogram represented by those two forces: but the wind acting on the fore part of the vessel, (which in most steamers presents a much larger surface than the after part,) brings her stern to the wind: the paddle-wheels, as before, send her in the direction of her length. Now, in going a-head, even with the assistance of the helm, the same vessel will take much more time, as well as a much greater space, to come into the direction of the wind, than when she is going a-stern; and from a like reason;—the same surface forward acts against her head coming to windward, as before it tended to bring her stern to the wind.

In any vessel going a-head with the helm hard over, suppose a ship tacking, or a steam-boat altering her course, the fore part of the vessel is steady while the stern makes the movement. In a steamer going a-stern, the after part of the vessel is steady while the fore part makes the movement.

In a calm a steamer will sometimes obey her helm when going a-stern, but it is not at all to be depended on: it is as well, perhaps, for the sake of the pintles, to keep it a-midships.

"I have," says Mr. Allan, "put the *Volcano* to the task so often, even in the crowded harbour of Alexandria, that I will venture to assert that it may be laid down as a certainty, in steam-boat evolutions, that the stern will invariably come up into the wind with a back turn, and that, in the stronger wind, she will take less time and less space."

* In journalizing, according to the recent practice, the force of the wind is denoted by the figures 0 to 12;—0, signifies calm; 1, light air; 2, light breeze; 3, gentle breeze; 4, moderate breeze; 5, fresh breeze; 6, strong breeze; 7, moderate gale; 8, fresh gale, &c. *Atlantic Memoir*, 8th Edition, 504.

MEDITERRANEAN SEA, &c.

•• THROUGHOUT THIS WORK, THE GIVEN LONGITUDE IS THE LONGITUDE FROM GREENWICH. *The BEARINGS and COURSES are those by COMPASS, unless WHERE OTHERWISE EXPRESSED: BUT THOSE GIVEN THUS, [W. S. W.] SIGNIFY THE TRUE; AND THE GIVEN DIRECTION OF WIND, TIDE, and CURRENT, IS ALWAYS TO BE CONSIDERED AS THE TRUE.*

THE present VARIATION of the Magnetic Needle, in the Strait of Gibraltar, is $22\frac{1}{2}$ degrees West: Near the Isle Alboran, and thence to Cape Palos, 22 degrees: At Mallorca, or Majorca, and thence to Corsica, $21\frac{1}{2}^{\circ}$: Off Cape St. Sebastian, 21° : Marseilles, Toulon, and Hieres, $19^{\circ} 40'$: Genoa, 17° : Strait of Bonifacio, $18^{\circ} 45'$: Isle of Elba, 18° : Mouth of the Tiber, $17^{\circ} 30'$: Bay of Naples, 17° : West end of Sicily, $17^{\circ} 30'$: Æolian Isles, $18^{\circ} 50'$: Messina, $18^{\circ} 30'$: Syracuse, $17^{\circ} 45'$: Malta, 18° to $17^{\circ} 20'$: Pantellaria, 17° : Linosa, $16^{\circ} 43'$: At Tetuan, $22^{\circ} 30'$: Bay of Tunis, 18° : Cape Mesurata, $16^{\circ} 50'$. All these conclusions have been deduced from observations made in the British ships of war on the Mediterranean station.

I. The STRAIT and BAY of GIBRALTAR, from CAPE TRAFALGAR to GIBRALTAR, CAPE SPARTEL to CEUTA, and thence to TETUAN.

This Section is arranged as follows:—1. DESCRIPTION of the SPANISH COAST from Cape Trafalgar to Gibraltar.—2. The AFRICAN COAST, from Cape Spartel to Ceuta and Tetuan.—3. The TIDES and CURRENT.—4. DIRECTIONS for SAILING, both from the WESTWARD and EASTWARD.

1. THE SPANISH COAST, FROM CAPE TRAFALGAR TO GIBRALTAR.

CAPE TRAFALGAR, by the antients called the *Promontory of Juno*, is situate in latitude $36^{\circ} 10' 15''$, and longitude $6^{\circ} 1' 30''$ W. It is not high, but may be known by its remarkable figure, being flat, and terminating with two sharp corners, or angles. A round tower stands on the eastern corner. To the eastward of the flat the land is very uneven and mountainous. East of the flat land are high sandy cliffs, but none to the westward. To the north-westward of the Cape the coast is low and sandy, excepting a few rocky points, equally low with the rest, and of which one extends outward to the distance of more than a cable's length.

The ALTOS or HEIGHTS of MECA, to the north-eastward of Cape Trafalgar, are very level on the summit, and appear to be divided into two parts, spotted with green clumps, and a few patches of white sand.

The TOWER of MECA is a league to the S.E. by E. $\frac{1}{2}$ E. [$E. \frac{1}{2}$ S.] of Cape Trafalgar. Between is seen a patch of sand, called the *Boqueron*, useful as a mark for the shoals in

the offing. At little more than two-thirds of a mile E. by S. [*E. by N.*] from the tower of Cape Trafalgar, the beach is low, and has a small creek, with some rocks lying before it. This is called the *Barcadero* (landing-place) of *Meca*, and here water may be obtained. Vessels may anchor off this place, in a convenient depth, on clear ground, sheltered from north-westerly, northerly, and north-easterly, winds.



E. $\frac{1}{2}$ N. Cape Trafalgar, with the pitch and tower E. $\frac{3}{4}$ S. about 3 leagues. E. $\frac{3}{4}$ S.

BANK OFF TRAFALGAR.—A bank of sand, extending one mile and a half N.N.W. and S.S.E., lies at the distance of between 3 and 4 miles from Cape Trafalgar. Its least depth is 3 fathoms, but around it are from 8 to 10 fathoms, at a short distance. The north end bears N.W. by W. $\frac{1}{2}$ W. [*N. 83° W.*] $3\frac{1}{2}$ miles from Cape Trafalgar; and here the tower on that cape appears in a line with the Tower of Meca. The S.W. end bears W. $\frac{1}{2}$ N. [*W. S.W. $\frac{1}{2}$ W.*] $2\frac{1}{2}$ miles from Cape Trafalgar, and S.S.W. [*South*] from the tower of Conil. From this end, the tower of Trafalgar appears in a line with the sandy spot called the Boqueron.

THE SHOAL OF ACEYTERA.—This is a reef or chain of rocks, extending North and South about one mile, and about two cables' length in breadth. The least depth is a fathom and a half at low water; but, in the intervals between the rocks, there is as much as 5 fathoms. The N.W. end lies W.N.W. $\frac{1}{4}$ W. [*S. 80° 15' W.*] nearly two miles from Cape Trafalgar, and the S.E. end W.S.W. $\frac{1}{2}$ W. [*S.W. $\frac{1}{2}$ W.*] at about the same distance from that cape. On the north end, the tower of Trafalgar is in one with the Boqueron: on its shoalest part, the same tower is in a line with the highest point of the high land of Meca. Other marks have been given by Tofino; but, as they cannot be readily ascertained by a stranger, they are omitted here.

Between the shoal of Aceytera and Cape Trafalgar, in an extent of half a mile, there seems to be a boiling in the water, with the appearance of breakers. This is merely the effect of the counter-currents, there being, in general, no danger; and, it is, therefore, called the Risa, or Laughter, of the cape. It may, perhaps, with more propriety, be called the RACE of Trafalgar. With westerly wind it is the outermost of those whirlpools of the Strait, which will be described hereafter.

During a heavy swell, with wind unsteady, it would be imprudent to attempt the passage between Cape Trafalgar and the shoal of Aceytera, as the sea then rolls deeply; and, should the wind fail, you may be obliged to come to an anchor in an exposed situation, and on bad ground.

From POINT MECA to the ISLE TARIFA the coast is irregularly formed by the rocky points *Sara*, *Camarinal*, *Plata*, *Paloma*, and *Peña*, connected by sandy coves, (as shown on the charts,) the eastern sides of which afford occasional shelter. SARA POINT is of moderate height near the sea, but shortly forms a mountain, with two towers, or other buildings, on its summit. The CAMARINAL is low, but has a watch-tower on it, and rocks stretching about half a mile out to sea. CAPE PLATA is the extremity of a mountain, gradually declining to the point, which has some rocks about it. The interior of the country, all the way from Meca Point to this cape, is hilly, and of considerable height.

THE TOWER OF PALOMA, on the point of the same name, is $4\frac{1}{2}$ miles S.E. $\frac{1}{2}$ E. [*S. 72° E.*] from Cape Plata. Some large low rocks extend before it. Between is the Ensenada, or Cove, of Balonia,* affording good anchorage and shelter, for ships of all sizes, at half a cannon-shot from the shore.

TARIFA, formerly an isle, is now a little peninsula, connected to the main by a sandy causey. It is small and low, but has, from the year 1813, been distinguished by a lighthouse, which exhibits a revolving light. On the outside, the water is generally deep; but, on the S.W. side, is a rock, the *Maroquina*, sometimes covered, and lying at half a musket-shot from shore.

* Here, according to D'Anville, stood the antient *Bælon*, the usual place of embarkation for Tingis, now Tangier.

CABEZOS.—The SHOALS called the *BAJOS DE LOS CABEZOS*, lie to the southward and south-eastward of Paloma Point. Of these there are four, the outer and least dangerous being the *Placer Nuevo*, or *New Shoal*, extending a mile E.S.E. and W.N.W. Of this bank, the shoalest part, near the west end, has $7\frac{1}{2}$ to 8, and the rest of the bank 9, fathoms, fine sand. It lies on the parallel of 36 degrees, $5\frac{1}{2}$ miles true East from Tarifa light; and from its centre Paloma Point bears N.N.E. [N.] 3 miles.*

The *Cabezos*, proper, lie at three-quarters of a mile E. by N. from the *Placer Nuevo*. In the channel between are from 8 to 12 fathoms. This channel lies with Tarifa light bearing S.E. by E. $\frac{1}{2}$ E., and thus you may pass through in 12 fathoms. On the late chart the shoalest water marked on the shoal is $5\frac{1}{2}$ to 8 feet; though a former description states that, in very low tides, there is so little water on them as to reach only to the mid-leg of the persons who collect shell-fish upon them; but, at a short distance, are from $2\frac{1}{2}$ to 3 fathoms; and, at a little farther, from 7 to 11 fathoms. Many vessels have been lost here, and few that have touched have been gotten off without some damage.

The *Placer del Oeste*, or Western Shoal, lies at half a mile from the *Cabezos*, and has over it from $2\frac{1}{2}$ to $5\frac{1}{2}$ fathoms. From the middle of this bank Point Paloma bears N.N.E. one mile and a half. The ground between is rocky, and in mid-channel are from 14 to 18 fathoms, shoaling thence to the point.

The *Bajeta* lies a mile and a half E.N.E. from the *Cabezos*, and a mile W.S.W. from *Punta de la Pena*. In the channel between are from $3\frac{1}{2}$ to 11 fathoms. On this shoal are from $5\frac{1}{2}$ to 14 feet of water, and from its centre the lantern of Tarifa bears S.E. by S. $3\frac{1}{2}$ miles. The ground between is of sand; depths 7 to 21 fathoms.

On the main, to the north of Tarifa Isle, stands the fort of *Santa Catalina*; being placed upon a little hill, it appears, at a distance, like an island. At E.N.E. true, about a mile from Santa Catalina, is Camorro Point, high, broad, and steep, with rocks about it; and between stands the town of TARIFA, at the foot of Mount Cabrito. In the cove, small vessels may be sheltered from westerly winds; and, in favourable weather, large vessels may anchor to the eastward of the isla, opposite to the sea-gate of the town, in from 15 to 18 fathoms.

POINT GUADALMESI, which lies East $4\frac{1}{2}$ miles from the lighthouse of Tarifa, is high and precipitous, with a watch-tower on its summit. On its eastern side is a small cove, with a deep valley, covered with gardens and orchards. From this point, at the distance of two miles and two-thirds more to the eastward, is the eastern point of *Açebuche*, the western point of which is a little within to the westward: both are surrounded with rocks, some above water, but not far without the land.

In the bay between Guadalmesi Point and the Points of *Açebuche*, one mile within the latter, is the castle of Tolmo, off which there is anchorage for small vessels, and shelter from northerly winds, in from 8 to 6 fathoms, good holding ground.

PUNTA FRAYLE, or *Friar's Point*, is about a mile E. $\frac{1}{4}$ S. [N. $65\frac{1}{4}^{\circ}$ E.] from the eastern point of *Açebuche*. The land is very high, but slopes to the sea, and on its summit is a watch-tower. Close to the point is an islet, that looks like a friar, with several rocks about it. On the eastern side of the point is a sandy cove, in which small vessels may be sheltered from north-westerly winds.

CAPE CARNERO, with *Cabrita Point*, lie, as shown in the plan of the Bay of Gibraltar, about two miles to the north-eastward of Punta Frayle, and within, on the S.W., is the little isle called *Palomas* or *Pigeon Island*. On the summit of Cape Carnero is a castle and watch-tower.

LA PERLA, or the **PEARL**, is a rock, having over it, in one spot, but 9 or 10 feet at low water; but, at two ships' length from it, both towards the land and on the outside, are from 7 to 9 fathoms. The mark for the shoalest part is, Pigeon Island in one with the third rising from the point of Carnero; a peaked rock, off the same point, in one with a hill that makes like a sugar-loaf, with a small saddle on the top of it, which stands to the eastward of S. Roque; and the tower on Punta Frayle bearing W.N.W. [West.] The town of S. Roque may be readily known, as it is seated on the top of a small hill; and there is no other place so situated for which it can be mistaken.

* On the site of this bank there has been said to be a rock, on which the *Thisbe* frigate struck some years ago. It proves to be imaginary only. The *Thisbe* must have struck upon the *Cabezos*.

BAY of GIBRALTAR.—From Cabrita Point, or that of Carnero, *N. $\frac{1}{2}$ W.* true, nearly two miles, is the broad point and tower of S. Garcia; between is Getares Bay, or rather Cove, having a good depth of water, and good ground, excepting near the rocky points; but it is completely open to easterly winds, which send in a heavy swell.

The coast hence, to the northward presents numerous rocks, surrounded by which is the isle of *Algeciras*, called *Verde* or *Green Island*. This is of moderate height, and fortified. From the island, towards the S.W. and N.E., the chains of rocks extend so much in a straight line, as to appear like an artificial wall or pier, with channels sufficient to admit feluccas. The rocks on the eastern part do not project so far from it, but are equally parallel with the rest. The Mole of Algeciras is about half a mile from *Isla Verde*, and admits coasting vessels at high water. At half a cable's length east from the Mole is the *Galera*, a rock even with the surface of the water, with a reef on its N.E. side, and there is another shoal, with some rocks off the town.

ALGECIRAS was formerly a considerable port. It is agreeably situate on a gentle slope by the sea-side; and a little river, the *Miel*, which rises in the neighbouring mountains, passes its southern side, and thence runs gently on to the sea. At three-quarters of a mile from the Fort of S. Antonio, which stands at the north end of the town, is the tower of *Almiranta*, on a point of moderate height, surrounded with rocks and stones.

At the distance of $2\frac{1}{2}$ miles, to the northward, from the *Isla Verde*, is the bar of the River Palmones, which river is resorted to in winter by the trading vessels of Algeciras. *Punta Mala*, on the eastern side of the bay, opposite to the River Palmones, is a little elevated, and has a castle upon it, which is situate at nearly a mile and a quarter to the north-westward of Fort S. Philip, which stands at the west end of the Spanish lines. From Point Mala, a ledge of rocks extends to the S.W. about two cables' length, some of which are above water. Northward of the point, at three-tenths of a mile, is the Hospital de la Sangre.

GIBRALTAR.—From the fortified line, which separates GIBRALTAR from the Spanish territory, the land is very low and flat, but thence rises, abruptly, the north side of this celebrated promontory, to its rugged summit, which is 1,400 feet above the level of the sea, and commands a most extensive view of Spain and Africa*. The town, which is situated on the western base of the mountain, contains about 10,000 regular inhabitants, and the garrison commonly amounts to 5,000 more. The number and strength of the military works, and the vast galleries opened in the calcareous rock, excite admiration. The fortress, in the opinion of most military men, is absolutely impregnable. The streets are now kept extremely clean; they are well paved, and sewers, &c., are made to carry off all water and filth.

The eastern side of the mount is very steep, but the western side so declines to the sea, that the town is erected on its base. From the north end of the town, the old Mole extends, in a true N.W. by W. direction, about 1,100 feet: the New Mole, at a mile and a half to the southward, extends 700 feet to the N.W. The latter, with an elbow formed by the shore, affords shelter for several vessels, even ships of war, which in winter may moor under it: the farthest out in from 5 to 6 fathoms.

On the WESTERN SIDE of the BAY a vessel may come to an anchor at half a mile from Cabrita or Carnero Point, in from 18 to 27 fathoms, fine gravel and sand, and even outward to 38 fathoms. The same depths may be found to the northward, towards Point S. Garcia, but there the ground is not good. The best and most secure anchorage, at all times, is, however, from off the centre of the town of Algeciras towards the River Palmones and Bridge of Mayorga, or River of St. Roque: the limit commences when you have passed the line on which Point Carnero appears in one with the middle of Apes' Hill, in Africa, and the Rock la Galera in one with the south end of Algeciras. The best station is to the northward, towards the Palmones; or more to the eastward, at half a mile from shore. It is requisite to sound before the anchor be let go, lest the depth be too great.

* The name GIBRALTAR seems to signify a steep rocky mountain, or one with a peaked summit; as Gibe el Tor, in Palestine, which is in form of a sugar-loaf. *Tor* is a word extending to many languages, and conveying the same radical idea: it signifies a high rock, or summit.

ANCHORAGES.—Vessels may come to, also, from the Bridge of Mayorga or St. Roque, all the way to St. Philip's Castle, only avoiding the foul ground near the reef of Point Mala, already described. Hence to the Old Mole of Gibraltar the ground is good, and at the latter is the usual anchorage of English vessels; the smaller by the Mole, and the larger farther out. Before the space between the Old and New Moles, vessels likewise anchor, in whatever depth may be preferred; at about half a mile from the fortifications; not nearer, as there are rocks along shore; not farther off, lest they miss the bank. Ships may also ride between the New Mole and Europa Point, at the same distance from shore, although in deeper water.

To the Remarks on, and Description of, GIBRALTAR, given above, the following may be added.

To avoid the *Pearl Rock*, which lies off Pigeon Island, and which has no more than 10 feet of water on it, be sure not to bring Europa Point to the eastward of E.N.E. until the town of St. Roque be open of Carnero or Cabrita Point. You may then stand into the bay and take up an anchorage.

To anchor on the N.E. side of the Bay, off the Old Mole, open the *Devil's Tower*, which stands at the N.E. extremity of Gibraltar; you may then steer for it, and anchor in what depth of water you please. In time of war ships anchor off the New Mole: they bring the head of that mole to bear S.E. or S.E. $\frac{1}{2}$ S., and let go the best bower in 20 or 22 fathoms of water. You moor with the small bower to the S.E. in 11, 12, or 13, fathoms, and will then have 14 or 15 fathoms under foot, and the head of the Old Mole bearing N.N.E.* Water may be had in *Rosia Bay*, at the back of the Old Mole; but at this place there is not sufficient quantity for a fleet.

The most dangerous wind, and that which causes the most sea here, is from South to West; and it would not be advisable to anchor in a gale from that quarter, unless absolute necessity requires you to do so.

Wood may be obtained here in small quantities only; but provisions, fruits, and wines of all kinds, may be had in great plenty in time of peace with Spain. In time of war fresh provisions are very scarce and very dear: being mostly brought from the Barbary coast. It is well known that a great trade is carried on at Gibraltar with the coast of Barbary and different ports in the Mediterranean, and, also, an inland trade with Spain.

In the New Mole there is a dock-yard, with a sheer-hulk and a careening-wharf, where ships of the largest size may be hove down.

Gibraltar is defended by about 400 pieces of cannon. The town has two wide streets and several narrower ones: it stands on a rock, but has a number of trees and shrubs regularly planted in different parts, with neat little kitchen-gardens, and the buildings generally are neat and regular, standing one above another on the side of the rock. The roadstead is not altogether safe for shipping, and particularly to boats under sail, which are subject to heavy squalls.

The *Cacafogo*, gun-boat, was some years ago lost on a rock which lies about 300 yards to the north-eastward of Europa Point, and sometime afterward the Commissioner's yacht narrowly escaped the same fate. The rock is a pinnacle, of small size, and a line-of-battle ship may pass inside of it. In moderate weather a vessel may anchor off Europa Point, in 10 fathoms, on clean sand, at a considerable distance from shore.

2. THE AFRICAN COAST FROM CAPE SPARTEL TO CEUTA AND TETUAN.

The AFRICAN COAST.—CAPE ESPARTEL or SPARTEL, the N.W. point of the State of Morocco, is situate in latitude $35^{\circ} 48' 15''$, and longitude, $5^{\circ} 54' 25''$ W. Its bearing and distance from Cape Trafalgar are, therefore, S. $\frac{3}{4}$ W. [S. 15° E.] $22\frac{1}{2}$ miles. The cape, at a distance, appears like an island, and is so high as to be seen, in clear weather, at the distance of 14 or 15 leagues. The outer point, when seen from

* Another Journal says, The best anchorage is with the Devil's Tower just open to the northward of the Rock, and St. Roque's church in one with a barbet-battery on Point Mala, where you will have from 15 to 18 fathoms, sandy bottom. It is best not to shut in the Devil's Tower, as there the bottom is very foul. In working into the bay, with an easterly wind, stand to nearer to Point Mala than three-quarters of a mile, as there are rocks without it.

a short distance to the westward, appears uneven, with eminences on it like hummocks, and the high lands resemble the awning of a galley. The ground about the Cape is quite clear, with the exception of some high rocks, which are steep-to.*

Between Cape Spartel and the western point of Tangier Bay, a distance of $4\frac{1}{2}$ miles, the coast is high and clear, but bordered with rocks, and there is one rock, the *Pacifico*, discovered in 1818, which lies at three-quarters of a mile N.N.E. [North] from Tangier Point. Depths between, 11 to 20 feet. A reef extends around the point to the distance of two cables' length: here the ground is of gravel and small stones.

CAPE MALABATA or Malabat, the eastern point of Tangier Bay, is 3 miles E. $\frac{1}{2}$ S. [E.N.E. $\frac{1}{2}$ E.] from Tangier Point. This projection, also, is surrounded by a reef, but not so extensive a one as the former. At about three-quarters of a mile N. by W. $\frac{1}{4}$ W. from the cape there is, however, a rock, on which the *Excellent*, a 74-gun ship, struck some years ago. While the ship was on the rock, there was found to be a depth of 6 fathoms on one side, and $5\frac{1}{2}$ on the other. She was over in less than a minute. This rock, named the *Almirante*, has 3 fathoms over it, and lies at a mile N. by W. [N.W. by N.] from the cape.

TANGIER BAY.—The town of TANGIER, antiently called *Tingis* and *Tingia*, which stands on the western side of this bay, is now a place of little consideration, and contains about 6,000 inhabitants. The Spaniards visit this place for eggs, fowls, vegetables, and some fruits; but the chief exports are cattle and edible vegetables, which are taken to Gibraltar for the supply of the garrison. Mr. Jackson says, 'This supply is allowed by the emperor, not perhaps from any predilection towards us, (although he apparently prefers the English to any other European power,) but because it was a grant from his great grandfather, Muley Ismael, whose successors have not infringed on the ordinances of their renowned ancestor; the Mahomedans having a great respect for the deeds of their forefathers.' The Bay affords convenient anchorage for vessels of all sizes, opposite to the town, in from 9 to 12 fathoms, sand: but, it is to be observed that, on the eastern side there is a rocky ledge, bearing S.E. $\frac{1}{2}$ E. from Tangier Point, and S.W. by W. $\frac{1}{4}$ W. from Cape Malabat. This Cape, in a line with Europa Point, Gibraltar, leads clear of the shoal, and the anchorage, therefore, lies with Gibraltar open of the Cape. Ships moor to the N.W. and S.E. with the longest cable to the N.W., and it will be proper to buoy up and protect the cables, as they may be exposed to injury from the hard roots of large sea-weeds, which grow in the bottom of the bay, as well as from coral, hereafter described.

A large mooring chain has been discovered in the western side of Tangier Bay; it is supposed to have laid there from the time of Charles II., King of England, and to have caused the loss of many anchors; a loss attributed to the roots of sea-weeds, &c. It lies nearly in a true E. and W. direction, north of the parallel of the town, and from one-fourth to more than one-third of the breadth of the bay from the western shore. The Road or best ground for anchoring is between this chain and the reef on the eastern side of the bay.

On the south side of the bay is a high and pleasant-looking hill, and about the town is a wall and some fortifications. On the shoalest part of the ledge, above mentioned, the depth is only 12 feet, and there are 5 fathoms, on rocky bottom, close to it: it is about three-quarters of a mile off the shore, and not more than 3 or 4 fathoms in length. Between it and the eastern shore are 10 fathoms of water, and at the distance of about 10 fathoms from it are 7 fathoms. On entering the bay with an easterly wind, you may borrow towards Point Malabat at pleasure. From the anchorage, in 8 fathoms, the north end of Gibraltar, open of Malabat Point, bears N.E. by E. $\frac{3}{4}$ E. [N. 41° E.]; the old bridge of Tangier, S. $\frac{1}{2}$ W.; the old tower of Malabat, E.S.E. $\frac{1}{2}$ E. and the town of Tangier, N.W. by W. $\frac{3}{4}$ W. about one mile and a half distant. There is broken coral all over the bay, and ships should never lie with more cable out than is sufficient to keep them from driving; and the cables should be rounded as far as 10 or 12 fathoms from the anchor. There is said to be a spot of clean ground, in $9\frac{1}{2}$ fathoms, with the north part of Tangier town-wall on with a white patch on Cape Spartel, bearing W.N.W. $\frac{1}{2}$ W. [W. $\frac{1}{2}$ S.] and the pleasant hill above mentioned bearing from S.S.W. to S.W. by S. Easterly or Levant winds cause a heavy swell to tumble into the bay.

* Captain Livingston has informed us that, there is a range of well defined basaltic columns, appearing like a coronet, around the west side of Cape Spartel, and about one-third of the whole height from the summit. Though not to be compared with those of the *Giant's Causey*, Ireland, or *Staffa*, in the Hebrides, he thinks them the next finest that he has seen.

On full and change days, the tide in the bay rises 5 feet; the flood sets to the westward till 12 o'clock, but does not extend thus more than a mile and a half from the shore. See the remarks on the Tides, &c. hereafter.

TANGIER to CEUTA.—The whole of the coast from Tangier to Cibta, or Ceuta, is rugged, and interspersed with rocks and projecting cliffs. The interior is high; and, directly *South*, true, from the bay of Gibraltar, is the *Jibbel D'Zatute*, or *Apes' Hill*, the *Sierra Bullones* of the Spaniards, and *Abyla* of the antients: this and the promontory of Gibraltar, *Calpe*, having been the *Pillars of Hercules*; hence the *Fretum Herculeum*, or *Frith of Hercules*, now the Strait of Gibraltar.



Tarifa Point East, 7 miles.

Apes' Hill, S.E. by E. (by compass.)

The POINT of ALCAZAR, or Castle Point, which lies $9\frac{1}{2}$ miles to the eastward from Malabat, is high, steep, and surrounded with a reef; between are two sandy coves, as shown in the Chart, in which there is anchorage close to the shore, in from 18 to 9 fathoms. Two miles from Alcazar Point is that of Sainar, which is low, and has several islets about it: between is the Cove of Alcazar, having a sandy beach and anchorage in from 15 to 20 fathoms.

A mile to the eastward of Sainar Point, is the Cove of Sainar, whence the coast extends, with various rocky points, one league N.E. $\frac{1}{2}$ E. [$N. 25^{\circ} E.$] to a projecting islet on the point of Ciris, and which stretches to the northward from that point about two cables' length. The Point of Ciris is low, but gradually rises up to a sharp-cornered mountain, which, from its remarkable form, is called the *Gap of Ciris*.

At a mile and a half to the eastward of Ciris Point is that called Lanchones, half a mile beyond which is Cruces Point. The first is high, broad, and steep, with rocks at its base: the second is not so high, and more even: between is a bay, three-quarters of a mile in depth, with a flat beach, off which is anchoring ground in 15 fathoms. At rather less than a mile from Cruces Point is the broad point of Almanza, high and abrupt, and forming a cove with a small beach.

The northern part of PEREGIL or PARSLEY ISLAND lies three-quarters of a mile to the eastward from Almanza Point. It is merely a rock, lying along shore, at the distance of a cable's length. There is a sunken rock near its N.W. point. Close to the outside is a depth of 18 fathoms. From over the middle of this isle the true bearing of the summit of Apes' Hill is $S. 17^{\circ} E.$; and, as it lies near the foot of the mountains, and is of the same colour, it is often difficult to distinguish it from the main, even at a short distance, although it is high.

LEONA POINT, at a mile to the north-eastward of Peregil, is steep and of moderate height. It is distinguished by a large tower in ruins. Between it and Peregil there is anchorage in 8 fathoms. At a mile and three-quarters E.S.E. $\frac{1}{2}$ E. [$S. 83^{\circ} E.$] from Point Leona, is *Punta Blanca*, or *White Point*, which is high, abrupt, of a dark colour approaching to red, with the ruins of a tower on it, some islets at its base, and a rocky shoal at a quarter of a mile to the eastward of it.* Between is Benzus Cove, wherein ships of any size may anchor, in 18 fathoms, bottom of sand, about two cables' length from

* Tofino describes this shoal as about the size of the hull of a man of war, with from 3 to 4 fathoms over it, excepting where the rock is highest, and the depth only one fathom over the size of a large long-boat. Between the shoal and shore are from 8 to 9 fathoms, rock; the channel only a cables' length broad; being narrowed by some islets, projecting about two-thirds of a cable from the shore. On the outside of the shoal are from 8 to 9 fathoms, bottom of rock. From the shoal, the outer islet of Torre-blanca, White-tower Point, appears in a line with Point Leona; the ruins of the tower, with the upper point of Apes' Hill, bear S.W. [$S. 66^{\circ} W.$]; and Point Bermeia, or Red Point, on the N.E. corner of the walls of old Ceuta, now merely a space of ground, inclosed with antient walls, towers, and battlements.

shore,

shore, and be protected from south-easterly and south-westerly winds. From the anchoring ground the islets of Punta Blanca bear E. $\frac{1}{2}$ S.; a remarkable pyramidal peak, a little up the country, S. by W. $\frac{3}{4}$ W.; and Point Leona, in one with Tarifa, N.W. $\frac{1}{2}$ N. [*N.* 62° *W.*]

At less than a mile from Punta Blanca, to the south-eastward, is Point Bermeia or Red Point, which, likewise, is high, and has a ruined tower upon it. The coast between is bordered with rocks, of which some are above the water. Without them the water is deep.

About three-quarters of a mile south-eastward from Bermeia Point is Benites Point, with the two low and flat islets of *El Campo*, to the eastward of which is the anchorage in the lesser Bay of Ceuta.

CEUTA.—The *ALMINA* is the peninsula, containing the suburbs and fortress of Ceuta. This place is well known as having been taken from the Moors, by John, King of Portugal, early in the fifteenth century, but was finally ceded to the crown of Spain in 1688, to which it continues to be annexed. The town is supposed to be of Carthaginian origin, and was colonized by the Romans. On the land-side it seems, like Gibraltar, to be impregnable.

The Almina extends about a mile and a half from East to West, and is surrounded with rocks. On its eastern and most elevated part is the Acho, or Castle of Ceuta, which stands in latitude 35° 54', and longitude 5° 17' W. To the westward of this are six little hills or eminences. On the western skirt of the Almina are the suburbs of Ceuta, then the city, which is fortified, between these and the main land.

The Punta Sta. Catalina is the northernmost point of the Almina; it is low, and has some islets and rocks about it. Between this and the rocky islets of *El Compo* is the anchorage in the lesser Bay of Ceuta, having from 13 to 8 fathoms, bottom of sand, with a few loose stones. Having opened the street called *Calle del Obispo*, (Bishop's Street,) which commences on the north side of the governor's house, this mark will lead to the spot. In every other part a bottom of gravel will be found. Ships moor with anchors to the N.E. and S.W.; the longest cables to the N.E.

The GREAT BAY OF CEUTA, formed by the Almina Point in the North, and Cape Negro in the South, is 11 miles long in that direction, and 3 in depth. Ships of all sizes may anchor, in any requisite depth, almost through its whole extent, near the shore. The BAY OF TETUAN extends to the southward from Cape Negro to Cape Tetuan or Mazari, a distance of 3 leagues, and is similar to that of Ceuta. In both, vessels are completely sheltered from westerly winds, but every precaution must be taken against winds blowing on shore. Should it not be thought advisable to anchor, a ship may keep under sail, on different tacks, in winter as well as summer, so as to be ready to take advantage of the first breeze of easterly wind, which may lead thence to and through the Strait.

The *Mount Negrona*, which stands at 7 $\frac{3}{4}$ miles nearly South, [*S.* 24° 48' *W.*] from the Acho or Castle of Ceuta, is lofty and black. On its summit is a square tower. Cape Negro, which is 5 $\frac{1}{2}$ miles S. by E. [*S.E. by S.*] from Negrona, is of moderate height, uneven on the surface, has a round tower on it, and is surrounded with islets.

TETUAN.—The RIVER of TETUAN falls into the sea at about a league and a half to the southward of Cape Negro: it admits boats and small craft at high water. At the entrance is a small castle of brick, and, at about a mile up, the custom-house. The city of TETUAN, which is 4 or 5 miles up the country, is said to contain 16,000 inhabitants, chiefly Moors and Jews, who, for the most part, speak a corrupt Spanish, in which language their commercial negotiations are transacted. The environs abound in gardens of the most delicious fruits; the finest oranges in the world; exquisite grapes, &c. From the raisins and figs the Jews distil an ardent spirit, called mahaya, which, when a year old, is similar to the Irish usquebah, and they prefer it to European brandy or rum, because, as they say, it does not heat the blood.

Although no European is allowed to settle here, this port has carried on a considerable trade in provisions with Gibraltar, as vessels are obliged to come here, in preference to Tangier, whenever the wind is settled in the West. During the late war our fleets often watered and victualled here. There is an excellent watering-place, in particular, at a mile to the southward of Mazari, or Cape Tetuan, which Cape is distinguished by a white tower.

The

The late Sir John Knight, of the navy, surveyed the bays of Ceuta and Tetuan in the year 1799, and he says, that, in both, are some spots of foul ground, more particularly in Ceuta Bay, in the depth of 10 to 17 fathoms. At the watering place, in the south part of Tetuan Bay, on some slight compliments being paid to the governor, fresh provisions of every kind may be obtained, reasonably and in abundance, with wood for fuel. Here ships may ride in perfect safety, on a sandy bottom, in from 18 to 22 fathoms, with the wind at *North*, by the *West*, to *S.S.E.* (*true*) at two miles from the shore; but within that depth the ground is, in some places, rocky.

The mode of watering is by landing the casks, and rolling them over a sandy beach, of about 30 yards wide, into the river. The native Moors and Arabs are civil, but not to be trusted.

Ships have a better shelter in Ceuta than in Tetuan Bay; but, on account of its vicinity to the garrison of Ceuta, it is less frequented in time of war. When the easterly or Levant winds spring up, it becomes necessary to get under way. The approach of these winds is generally indicated by a swell or current from that quarter, and by a clear atmosphere for some hours before the passing clouds begin to cap the hills.*

3. THE TIDES AND CURRENTS OF THE STRAIT AND MEDITERRANEAN SEA.

STRAIT OF GIBRALTAR.—On both sides of the Strait of Gibraltar, the tides would be regular, were they not influenced, as they greatly are, by the winds.

From Cadiz the tide of flood sets towards Cape Trafalgar, where it is high water, on the days of full and change, at about $V\frac{1}{2}$, but, at Tariffa, about $XI\frac{1}{2}$, and, at Gibraltar, $XII\frac{1}{2}$, where it rises about 5 feet. The flood again sets from Europa Point to Cape Carnero, and from thence to Tariffa, &c. so that it meets the tide from the west off Cape Trafalgar, where it is low ebb at the time when it is high water at Tariffa. The tide, in this way, runs as far as 2 miles off the coast: and, at that distance off Tariffa, it flows until two o'clock. The tide is perceptible eastward as far as Malaga, where it rises about 3 feet, but at some distance beyond this it is scarcely perceptible. At Majorca and Minorca the tides are very irregular; rising and falling a foot or two, according to the winds.

On the Southern Coast, from Cape Spartel to Apes' Hill, another tide runs along shore to the westward, as shown in the charts. In the great Cove, opposite to Tariffa, it is high water at 10 o'clock, but more to the West, near Tangier, at 12, and it continues in the offing an hour longer.

In the middle of the Strait, between the lines AA on the Chart, the current from the Atlantic Ocean sets generally to the East. This effect is supposed to be caused, in great measure, by the vast quantity of evaporation from the Mediterranean Sea, and the inefficient supply from its rivers: much also has been said on the existence and effect of under currents, which have been supposed to carry out a great portion of its water to the ocean. Near the shores, on both sides, are many changes, counter-currents, and whirlpools, caused by, and varying with, the winds.

In the MEDITERRANEAN SEA, generally, the TIDES are inconsiderable, mostly irregular, and, with respect to rise and fall, in many parts imperceptible, as the motion of the water in those parts seems rather owing to the impulse of the wind; notwithstanding this, the lunar influence is manifested, in many cases, by the changes of stream, and in others by the periodical rise and fall, both on the northern and the southern shores: Of both cases particular instances are given in the following descriptions, and they will be referred to hereafter.

We have shown, above, that, on each side of the STRAIT OF GIBRALTAR, there is a Tide, setting outward and inward along each shore. From the vicinity of Malaga, and still farther to the East, the flood sets along-shore, westward, to Gibraltar, and thence along the Spanish coast, until it meets that from the West off Cape Trafalgar. On the

* When Apes' Hill and the top of Gibraltar are covered with clouds, it is an indication that the Levanter or easterly wind will be of some continuance.

African shore the flood-tide likewise runs along shore to the West, though irregularly, until it is lost in the Ocean, as explained in page 9.

But, in the middle of the Strait, the current from the Ocean *generally* sets to the eastward, and the boundary of this current, as nearly as it can be given, is delineated on the charts of the Strait by lines marked AA. It, of course, varies according to the circumstances of wind, &c.: it sometimes, though rarely, ceases; and there is, still more rarely, in lieu of an easterly current, a current setting *outward* to the West. This may be caused either by an extraordinary tide, or by a surcharge of water, aided by a prevalence of easterly wind, in the Mediterranean Sea: and it is the more particularly to be regarded, because it has long been assumed, as a fact, that the central current invariably sets *inward*, and *always*, of course, affects the Ocean-water to the westward, inducing, to many leagues out, a general tendency to the same direction.

That sub or under currents, at times exist, and run counter to that on the surface, seems to have been proved by facts; but they have not been completely demonstrated, and a more full investigation is a desideratum.

The Mediterranean Sea, says a respectable writer, is said to be rather saltier than the Ocean. That it is not more so, which might be expected from its daily loss by evaporation, has been ascribed to an under-current, saltier than that of the Ocean, which runs out at the Strait, and unloads its waters of their excess of salt. The idea of a sub-marine current seems accounted for by the fact, communicated by Dr. Marcet to Dr. Carmichael, on the authority of the British consul at Valencia, that, some years ago, a vessel was lost at Ceuta, on the African coast, and its wreck afterwards thrown up at Tarifa, on the European shore, about 17 miles to the W.N.W.

A similar fact is stated by Dr. Hudson: in 1712 M. de L'Aigle, of the *Phoenix* of Marseilles, giving chase to a Dutch ship near Ceuta Point, came up with her in the middle of the Strait, between Tarifa and Tangier, and there gave her one broadside, which sunk her. A few days after, the sunken ship, with her cargo of brandy and oil arose on the shore near Tangier, at least 4 leagues to the West of the place where she sunk, and directly against the strength of the surface current; which has persuaded many that there is a *recurrency in the deep water in the middle of the Strait that sets outward to the ocean*. Phil. Trans. 1724. Vol. 33, p. 192. See Dr. Marcet's *Paper, on the Specific Gravity of Sea-water*. 'Edinb. Phil. Journal,' Vol. II. p. 356.

Of the irregular deviations of the Gibraltar Current, one of the most remarkable was seen by Captain Livingston in 1822, when the current in the Strait, instead of setting in to the eastward, as usual, was found to be decidedly setting to the westward, all across, for some hours; the flood-tide, (at springs) having *over-run* the general easterly current, proven by temperature; the water at the surface, being $4\frac{1}{2}^{\circ}$ warmer than at 6 fathoms down. Several vessels were carried right out to the westward. A Dutchman dodged it on the shore of Spain; Captain Livingston on that of Africa. About seven others, some in the centre of the Strait, were carried, from opposite Tarifa, very nearly as far as Cape Spartel.

Captain T. J. Maling, commanding H. M. ship Cambridge, on the coast of Peru, in a note addressed to Captain Livingston, 23d February, 1825, says, "I can have no objection to your making use of my name as that of one of the persons who can bear testimony that the current sometimes runs *out* of the Gut of Gibraltar much stronger than I ever knew it run in the Mediterranean; but I believe this fact now to be known, as an occasional but not frequent occurrence, to all persons who have navigated the Mediterranean Sea, and no longer to be a disputed point."*

Captain

* Captain Livingston says, "I once found the water quite still off Peregril Point, at the foot of Apes' Hill, (East of Tarifa, contrary to my friend Reiner's statement,) and I could not be deceived, for I steered the same course by compass from within a mile of the Barbary shore until almost abreast of Europa Point, and all that time kept two remarkable peaks in Africa in a line. When near the entrance of Gibraltar Bay we began to feel the ebb-tide setting into the Mediterranean.

"Captain John Hogan, of Liverpool, who commanded the schooner *Morning Star*, (prior to me,) told me that at one time he was twenty-five days between Cape Trafalgar and Gibraltar, both wind and current being constantly unfavourable.

"We have now, at least, sufficient authority for the fact of the current sometimes setting to the westward.

"Don

Captain *Barret*, an old trader to Gibraltar, informed Captain Livingston, in August, 1820, that, in his last voyage he had found the current set, for about three hours, decidedly to the westward, when he was off Tangier Bay; but the surface water appeared to be going to the eastward, while the westward current had hold of the vessel's bottom. Capt. L. adds, An intelligent master of a London ship says that, when at anchor at Tarifa, he has found the tide running at the rate of $5\frac{1}{2}$ knots; and Capt. *T. Walker* says, he has been obliged to have a man at the wheel steering his ship for the tide, when at anchor under Cape Spartel.

It is clear, therefore, that the current of the Strait is, in a degree, regulated by the tide, and will, according to the time of tide, set at the rate of from 3 to 6 miles. Westward of Tarifa, it sometimes, about the full and change of the moon, sets to the westward, quite across the Strait; but eastward of Tarifa it sets, more or less, to the eastward. To this information, communicated by Mr. *Ignatius Reiner*, Pilot, of Gibraltar, he adds, that with westerly winds, at the full and change of the moon, the current in the middle of the Strait, between Europa Point and Ceuta, sometimes sets at the rate of more than 7 miles an hour. At such times every point in the bay forms a whirl or an eddy, some of which are heavy and dangerous, at a considerable distance from shore.*

It follows that, in *general*, a vessel from the Atlantic, with an easterly wind, may easily beat through the Strait, into the Mediterranean, by keeping and tacking between the two boundaries of the central or eastern current; but always nearer to the coast of Barbary than to the opposite shore; the wind near this coast being always the more moderate; for even when in the vicinity of Tarifa, the east wind is strong enough to put a ship past her close-reefed topsails. Should the wind be very strong from the East, or the weather seem to threaten a tempest from S.E., take shelter, until it moderates, under *Cape Spartel*, before you attempt the Strait.

If, when in the Strait and bound eastward, there should be an indication of tempestuous weather from the S.W., it may be proper to run for, and take shelter behind, the *Almina* or *Ceuta Point*, in the Bay of Ceuta, where you may lie to, and find the wind and sea moderate. See, with respect to this bay and its anchorages, page 8.

MEDITERRANEAN SEA.—In settled weather, therefore, and under ordinary circumstances, when the great current has its regular course into the Mediterranean, we may calculate that, on the African coast, generally, a ship sailing eastward towards Sicily will be set a-head of her reckoning: for it has been ascertained that, between Sardinia and the main, the current, under such circumstances, sets eastward; as it does across the mouth of the Gulf of Tunis, and along the southern coast of Sicily. The current to the S.E., in the Channel of Malta, is at times so strong that ships have found it difficult to beat up to Maritimo; while others driven to leeward of Malta, have been obliged to carry a press of sail, in order to hold their own until a change of wind

"Don Tomas Vidal, of the college of S. Telmo, at Malaga, once, in a Spanish man of war off Tarifa, found the current setting strong to the westward.

"My respected friend, the late Captain Wm. Rogers, of the Countess of Chichester, Falmouth packet, and latterly commanding a packet on the Holyhead station, informed me that he twice found the current setting strongly out."

* In the investigation of Currents, the temperature of the different streams has become an interesting subject. On the 31st of August, 1820, the temperature in the Bay of Gibraltar, near the shore, was 62° ; in deeper water, 64° . On standing across, southward, 65° and 66° ; and at last, in the middle of the easterly current, it exceeded 70° . On the 14th of September, in the Bay, near shore, it was 69° , and in other parts 70° , after a fresh Levanter or easterly wind had prevailed for several days.

We find the following remark in Capt. Livingston's Journal of the 18th Sept. 1820. "First part of the twenty-four hours we seemed to be out of the general current, and in the tide-stream, as we evidently drifted nearer to Gibraltar, we stood off to get into the current, and did so. Before we entered it, the sea, at the edge of it, seemed to be two or three feet *higher* than elsewhere. When we got into it we had a considerable *swell*, though the water was very smooth before." A similar remark has, we believe, been made by Capt. Edw. Sabine, as to the elevated surface of the *Florida* or *Gulf Stream*.

The *Depths of Water*, in the middle of the Strait, are remarkable. On the meridian of Tangier the central depth is 190 fathoms; on that of Tarifa about 400; on that of Gibraltar, 750 fathoms; and, at two leagues farther eastward, no bottom at 1000 fathoms. So that there is, from West to East, a regular inclined plane. This is given from the respectable authority of Captain W. H. Smyth, by whom the depths were ascertained.

enabled

enabled them to make the island again. We may thus account, in some degree, for the loss of vessels in that region of mist and terror, the *Greater Syrtis*, or *Gulf of Sidra*, wherein there is a great swell and accumulation of water with N.W. winds.

The current doubtless continues eastward along the Libyan coast; and we have notices of its generally setting E.N.E. off Alexandria: thence advancing to the Coast of Syria, we find it setting northward, along that shore, where it acquires strength. *Captain* Beaufort has shown that, between Syria and the Archipelago, there is a constant current to the westward, slightly felt at sea, but very perceptible along shore, on a part of which it runs with considerable velocity. Opposed by the western coast of the Gulf of Adalia, it rushes with augmented violence towards Cape Khelidonia, where, diffusing itself in the open sea, it again becomes equalized.

4. REMARKS AND DIRECTIONS, FOR THE USE OF VESSELS BOUND FROM GIBRALTAR WESTWARD, TO THE OCEAN.

With a fair wind there can be no difficulty in passing hence through the Strait, attending only to the Tides and Current, as they have been described; but with an adverse or westerly wind it is far otherwise; and the following precautions and directions must be observed, in order to make the passage, which can be effected, under such circumstances, by small vessels only.

DIRECTIONS for small vessels bound westward, from Gibraltar, with westerly wind.—In general, all fast-sailing vessels from the eastward, of from 30 to 60 tons, may pass through the Strait with a light wind from the West and N.W., by working as follows:

After weathering Europa Point, you enter Gibraltar Bay, and hence approach the *Ensenada de Getares* on its western side; and, when you find that the ebb-tide is making, you may approach *Carnero Point*, keeping at a moderate distance from the coast, and between it and the edge of the easterly current. The stream of ebb at *Carnero Point* runs south-westward towards the *Punta del Frayle*; and, on entering into the evolution of the tide off *Point Azebuche*, you may find the regular flux and reflux by keeping within the limits above-mentioned: by keeping this direction, as the eddies off *Point Azebuche* move towards the west, you will be carried by the force of the flood-tide into the *Cove of Tolmo*.

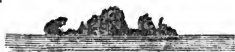
All this must be effected in the morning, at which time the wind is always off the land; and, from this reason it is advisable for vessels to anchor during the previous night in the *Cove of Getares*, until day-light: for it is not safe to work at night, all the coast being skirted with rocks.

Point Azebuche, which is $2\frac{1}{2}$ miles south-westward from *Point Carnero*, is the most difficult point in the Strait to weather when the wind is from the west; for then it has several eddies about it, and is dangerous, particularly to the larger vessels, which require much attention in tacking; and none should approach too near, as all the coast from the *Punta del Frayle* to that of *Azebuche* is skirted with rocks, and the *Pearl Rock*, as already shown, (page 3,) lies at nearly a mile from shore. It is not safe to stand near the latter, for, when tacking seems most necessary, you may be prevented here by the eddies and the change of wind, and run the risk of being lost.

After passing *Tolmo* castle, which is a mile to the north-westward of *Point Azebuche*, while the tide continues favourable, short tacks are to be made; taking care not to fall within the line of the central or easterly current, which is clearly defined by a ripple. With a light wind care must likewise be taken not to stand in too near the shore, between the Points of *Torre de Guadalmesi* and *Camorro*, the ground to an extent of $3\frac{1}{2}$ miles being very foul.* *Point Camorro* is very dangerous, having many rocks about it, one of which lies at a cable's length from the shore.

When near Tarifa, with little wind, should the tide-stream begin to change, you must

* Hereabout you may see a remarkable notch, on the top of a part of the range of hills extending from Gibraltar Bay to Tarifa. The annexed sketch of it was taken at sun-set, 16th Nov. 1820, by *Capt. Livingston*, when it was in a line with the *Torre de Guadalmesi*, and bearing N.E. $\frac{1}{2}$ E. [N.N.E. $\frac{1}{2}$ E.]



anchor in 9 or 10 fathoms, at about half a mile from the island, the lantern bearing West; for, by keeping under way, you would be swept to the eastward by the stream of ebb, and thereby lose all the labour spent during the flood: but, so soon as the tide again turns, you should get under sail, as the anchorage near Tarifa is not secure.

When you have advanced to the westward of Tarifa lighthouse, take care to avoid the Cabezos and other shoals, lying as described on page 3. In order to avoid these and secure your passage, it will now become necessary to stand over to the Barbary coast, keeping a good full, in order to get, as soon as possible, out of the strength of the central current, setting towards the East. After passing through this current, towards the Cala Grande, on the south shore, short tacks must be made, within and near the edge of the line of tide, so as to avoid the several rocks lying off, or extending from, shore.

After weathering the western point of the cove, *Cala Grande*, and the cove *Cala Baca*, it is necessary to tack, comparatively at a farther distance, owing to the great vortexes of the sea running rapidly towards the N.W. By working in this manner until after weathering Cape Malabat, you may thence work out at pleasure.*

Should not the flood be strong enough for weathering Cape Malabat, and the vessel be likely to be driven back by the ebb or contrary stream, it will be requisite to keep under cover of the cape, or to take shelter in the cove *Cala Grande*: because, with a stream setting eastward, there are eddies under the three points eastward of Malabat, which run to the west, and, therefore, regulate the tacks at a proper distance from the coast. This coast is very dangerous, there being rocks off the different points; and another reason for not attempting to anchor near it is, that the Marquins, at times, conceal themselves behind bushes near the shore, and thence fire their long muskets, for the sake of plunder, of which the consequence may be fatal.

Having arrived to the west of Cape Malabat, when the ebb begins to abate, you may anchor, if desirable, in the Bay of Tangier, with the marks given in page 6. The best spots are in 7, 8, and 10, fathoms, gravelly bottom. During southerly winds, as well as easterly, the sea comes in very high into the bay, causing the vessels at anchor to roll very much; and even with a fresh wind from S.W., a very high sea and swell come round from Cape Spartel.

LARGE VESSELS, bound Westward.—It would be useless for the commander of a large vessel to attempt a passage through the Strait of Gibraltar from the eastward, with a wind from the west; because the central current then runs to the East with great rapidity, especially during the new and full moon; and because the variation of the wind will not allow a large square-rigged vessel to approach near enough to the shore to take advantage of the eddies. In this case, if a ship has arrived from the east to a situation between Ape's Hill, on the coast of Africa, and the Point Azebuche, on the coast of Spain, the best way is to come to an anchor in the Bay of Gibraltar; otherwise she may be driven back into the Mediterranean Sea.

Great precaution must be taken in the Strait when there is a fog or haze, in order to keep in the middle as much as possible. The commanders of vessels of war, in particular, when cruising in the Strait, must be very careful during tempestuous winds from the East and S.E.; for such winds are accompanied by a very heavy and broken sea, and the current then runs with rapidity towards the N.W., that is, to the coast of Spain. It is, therefore, necessary, when to the eastward of Europa Point and the Almira Point of Ceuta, to stand well over to the southward during the night, in order to avoid the fate of many vessels that have been wrecked at the back of the Rock of Gibraltar.

It is useless for the commander of a vessel, whether large or small, to continue in the Strait with a boisterous wind from S.W., as the eddies then swell the sea very much, and render it very dangerous, particularly in winter. The safest way of acting, in this case, is to run for the Bay of Gibraltar, and anchor in from 14 to 5 fathoms, in clear sandy ground, so soon as the Devil's Tower comes in sight.

* Upon the principle here explained, H. M. Mortar-vessel *Hamoaze*, Captain Mac Causland, proceeded through the Strait, on the 11th and 12th of August, 1824, when she beat through with a wind at W. by N. and fresh breezes; being, at the same time, encumbered with a heavy-laden merchant ship under convoy and *in tow*. We have been informed that a similar operation had never before been performed in the Strait, by any of his Majesty's ships or vessels of war.

5. DIRECTIONS FOR SAILING THROUGH the STRAIT, both from the WESTWARD and EASTWARD.

An elegant writer, in noticing the passage into the Mediterranean Sea, says, "We speak from personal knowledge when we say that, the rival mountains of Africa and Europe, vying with each other in grandeur and sublimity, the singular appearance of the almost insulated rock, jutting out into the sea, the narrow passage at the entrance, giving the idea of the waters of the Atlantic having forced their way, in spite of every obstacle which nature opposed to them, and all enlivened by a brilliant sun, and a tint of colouring peculiar to southern latitudes, constitute a panorama of unequalled scenery, of which it is difficult to form any just idea but from actual inspection." The scenery through the Strait, indeed, is fine, and presents a grand assemblage of the magnificent features of nature.

"On a calm day in the Mediterranean, the rays of the sun, deeply refracted in dark blue waters, give them all the appearance of the changing and iridescent hues of mother of pearl. Hence the couplet,

"Till every wave, with crimson hue,
Shall tinge its iridescent blue."

Vessels bound to Gibraltar from the westward, having passed the Cabezos and Shoals, described in page 3, should haul in for the Spanish Coast, especially if the wind be to the northward of the west, otherwise the current may carry them to the eastward of the rock. When St. Roque town is open to the eastward of the rocks off Cape Carnero, they may haul in for the Bay, giving the Cape, and the points within, a good berth. Having run up the Bay so far as to open the Devil's Tower, which stands at the N.E. end of Gibraltar, steer for it, and anchor in what depth you prefer, mooring S.E. and N.W., so as to have an open hawse with a S.W. wind. During war, ships generally anchor off the New Mole.

If bound into the Bay, from the eastward, with the wind blowing fresh, you must take care to keep to leeward, out of the eddy-wind of the Rock, and stand in to the north part of the Bay to the shore, by the lead, where the soundings will be found regular, as already described. Turn up along shore, taking care, when standing to the southward, to tack so soon as, or before, you come to the flaws from the rock, which are very perceptible. When you have advanced as far to the windward as is desirable, anchor as above.

In sailing out of the Bay, from the anchorage, with a strong easterly wind, set no square sails until you have advanced to leeward of the flaws.

Should you happen, when coming in from the westward, to be carried by the current behind, or to the eastward of, the Rock, good anchorage may be found in 20 fathoms, with Europa and Cabrita Points in one, and the Devil's Tower just open. There are gradual soundings to the Rock, shoaling to 4 fathoms. From the anchoring ground here, you may, by taking the western tide, turn into Gibraltar Bay, observing to stand but a very little way off Europa Point. You may easily perceive the ripple between the current and the tide; and, when you think that you can weather Europa Point, it is not advisable to stand into the Bay, but make a short tack or two in the tide that sets from Europa Point to Cape Carnero; otherwise you may get into the eddy-tide, which will take you on the weather-bow, and deceive you.



Appearance of the Strait of Gibraltar, from the Mediterranean Sea.

When

When coming down the Mediterranean, in order to run through the Strait, if the weather be clear, the Rock of Gibraltar may be seen at the distance of 40 miles, appearing like an island, higher to the North than to the South. At the same time, Apes' Hill, appearing also like an island, may be seen; so that the Mouth of the Strait will be quite open, and you may enter it boldly. Here it becomes requisite to notice, however, that, as beyond the North end of Gibraltar the land is low, with a flat shore, beyond which, on the North, are several high mountains: this appearance has caused many, in the night, and in hazy weather by day, to mistake this part for the Strait's Mouth, by supposing the Rock of Gibraltar to be Apes' Hill, in Barbary, and those mountains to be the Rock: thus have they run on shore. Similar mistakes have been frequently made by mistaking Apes' Hill for Gibraltar, and the low land in Ceuta Bay for the Strait's Mouth: the consequences have, in course, been equally fatal.

In order to prevent such misfortunes, *Tofino* recommends that all vessels, under similar circumstances, should make the coast of Spain, running down until the Sierra of Estepona (lat. $36^{\circ} 28'$) comes in sight, which will, by its position and bearings, to an attentive mariner, readily point to the situation of Gibraltar.

In advancing from the eastward, towards Gibraltar or Ceuta, you may probably make the *Islet Alboran*, which, when bearing W. by N. 5 miles distant, appears as in the annexed figure.



Alboran, W. by N. 5 miles.—(Taken by Lieut. M. A. Slater.)

This isle lies nearly on the meridian of Adra, in latitude $35^{\circ} 56' 30''$, or $35^{\circ} 57'$, and longitude $3^{\circ} 0' 55''$ W. It is about half a mile in length from East to West, and one quarter in breadth. It is of moderate height, and can be seen, in clear weather, at the distance of about 4 leagues. The south side is nearly perpendicular; the north side less so, and the surface nearly level. At about half a cable's length from the east end is a small islet or rock, and there are breakers all round to nearly the same distance. There is anchoring ground off the East end, in from 25 to 30 fathoms. In the vicinity of the island the current, in general, sets strongly to the eastward.

At a little to the southward of Alboran, and 98 miles more to the east, is a *Bank*, 4 miles in extent from East to West, true, and having over it from 37 to 50 fathoms; its breadth is about 2 miles. Its place may commonly be ascertained by the ripple of the water.

A *Shoal*, which requires attention, lies in latitude $36^{\circ} 20' 4''$, at the distance of 25 miles N.E. $\frac{1}{2}$ N. [*N. 16° E.*] from Alboran, and $20\frac{1}{2}$ miles S.S.W. $\frac{1}{4}$ W. [*S. 3° W.*] from the castle *Guardias Viejas*. This is small, but described as having some dangerous spots on it, and should, therefore, be carefully avoided, especially during a heavy sea.

From the Isle Alboran, Europa Point, on the eastern side of Gibraltar Bay, bears N.W. by W. $\frac{1}{4}$ W. [*W. 4° N.*] 38 leagues, and Ceuta Point W.N.W. $\frac{1}{4}$ W. [*W. 2° S.*] 37 leagues. Allowance must, of course, be made for the current, which sets as above described.

Directions for Sailing from Gibraltar westward, with adverse winds, have been already given. See page 12.

II. The COAST of SPAIN, from GIBRALTAR to CAPE CREUX, &c.

STA. BARBARA, &c.—At the distance of 3 miles N.N.E. from the S.E. extremity of Europa Point is the Fort or Castle of St. Barbara, which forms the eastern extremity of the Spanish Lines. At a mile and a quarter, in the same direction, from Fort St. Barbara, is the *Battery of Tunara*; and, at a mile and a half farther is the *Torre Nueva*, or *New Tower*, situate on a rocky point. At $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. from the Torre Nueva, is the tower of *Carbonera*, beyond which, $2\frac{1}{2}$ miles, in nearly the same direction, is the mouth of the River Guadiaro, which is entered, by coasting vessels, at high water. The rocky

rocky and projecting point, named *La Chullera*, is $2\frac{1}{2}$ miles E.N.E. $\frac{1}{2}$ E. from the mouth of the Guadiaro: this point has a tower on it.

From FORT ST. BARBARA TO CHULLERA POINT, the coast is, in general, a low beach; but there are several rocks near it, some of which are above the water. At Chullera Point the coast begins to ascend; and at N.E. $\frac{1}{2}$ N., two miles from it, near the water's edge, stands the castle of Sabinilla. Between is a rock, called *Al-corin*, about the size of a ship's launch, at the distance of a cable and a half from shore. The small town, named *Manilva*, stands on a hill, at about half a league inland from Sabinilla Castle. On the coast are several rivulets of fresh water.

At half a league N.E. $\frac{3}{4}$ E. from Sabinilla Castle, is the tower *del Salto de la Mora*, surrounded with rocks. A large shoal, or sunken rock, lies S. by E. two cables' length from this tower: it is a little above the surface at low water, but is, at high water, entirely covered with breakers. An islet, close to the land, and called *Las Palomas*, lies half a mile N.E. by E. $\frac{1}{2}$ E. from the tower.

ESTEPONA.—The two principal towns between Gibraltar and Malaga, are *Estepona* and *Marbella*. Of these, Estepona is the largest and most considerable; the church, with its high spire, is a remarkable object. The town stands close to the shore on the low ground extending southward of the Sierra Bermeia, (pronounced *Bermeha*,) which is also called the Mountain of Estepona.

The Punta dela Doncella, which forms the western side of the little bay of Estepona, is $3\frac{1}{2}$ miles N.E. by E. $\frac{3}{4}$ E. from Mora Point. The N.E. point of the same is Marmoles Point: between the two, which are a mile apart, is a good road for small vessels in 4 fathoms, and for larger in from 14 to 18 fathoms, with shelter from north-westerly winds, opposite to the town of Estepona, which lies about a mile up from shore. The direct course and distance to this place, from Europa Point, are N.E. $\frac{1}{2}$ E. [*N.N.E. $\frac{1}{2}$ E.*] 7 leagues. There is said to be a shoal at about 3 miles S. by E. [*S.E. by S.*] from Estepona, which must be carefully avoided.

On the western side of Estepona is the River Monte Roxo, where, even in summer, plenty of fresh water may be had. On the beach, before the town, there is, besides, another watering place.

To the N.W. of Estepona is the high range of mountains, called the SIERRA DE ESTEPONA, or *Bermeia*, already noticed on page 15, and which constitute an excellent mark for all this coast. The TOWER of GUALMAZA stands on a plain, at $4\frac{3}{4}$ miles E. $\frac{3}{4}$ N. from Estepona: a sandy point stretches from it to the southward, to the distance of two cables' length.

On any part of the coast hence to Europa Point, vessels may anchor, during West or N.W. winds, at about a mile from shore; or they may lie-to, and, by taking advantage of the tide, may ply to windward, until they gain the Bay of Gibraltar.

Nearly E. by S. $2\frac{3}{4}$ miles from the Tower of Gualmaza, is that of Banos, seated on a sand-hill at a quarter of a mile to the N.W. from a low sandy point of the same name. Between these towers is another, *El Saladillo*, northward of which, 3 miles, is Monte Mayor, a remarkable hill, with a ruined castle upon it.

Notch N. by E. $\frac{1}{2}$ E.



Summit of the highest mountain between those of Marbella and Estepona.

MARBELLA.—The CASTLE of ST. LUIS and TOWN of MARBELLA, stand at the distance of $6\frac{1}{2}$ miles E. $\frac{1}{2}$ N. [*N. 65° E.*] from the tower of Banos. The castle stands at half a cable from the beach, and a ledge stretches about two cables from it to the south-eastward: the rocks nearest the shore appear above water, but those farther out are always covered. From the castle, westwardly, along the beach, is a range of warehouses and stores, from the most westerly of which another ledge of rocks and stones extends about two cables to the S.E., but with good water over it: the anchorage is between the two ledges, in 8 fathoms, bottom of sand.

The town is connected with the north part of the castle, where plenty of fresh water may be easily obtained. Large ships may come to, at a mile from the town, southward, in 18 fathoms, sand.

Marbella seems to be only a small town, without any very remarkable buildings, excepting

cepting one appearing like a convent; near the town are some patches of plantation, probably sugar-canes, which are represented to be cultivated here; and a large house, with many out-buildings above the town, may be the residence and works of the planter. Marbella stands close to the sea-shore, at the foot of the *Sierra de Marbella*, and immediately South of the Peak of Juana on the same mountain. Off Marbella soundings were taken in 32 fathoms, sticky bottom, about half a league from the shore.

To the N.W. from St. Luis' Castle is the high land called the *Sierra de Marbella*, and more to the eastward is the little *Peak of Juana*; both serve, like the *Sierra de Estepona*, as useful marks for the coast, and as a guidance thence to Gibraltar.

The Tower of LANCE DE LAS CANNAS, which stands $5\frac{1}{2}$ miles from the Castle of St. Luis, is thrice the size of the generality of the towers on this coast. It stands close to the beach, which is bordered with rocks. In the interval between are two other towers, and the shore is clean.

— The COVE and POINT of BURRA, in lat. $36^{\circ} 30' 50''$, are $2\frac{1}{2}$ leagues to the eastward of the Tower of Lance: a large tower stands, likewise, on this point, and there are several smaller between. From Burra Point, at the distance of a mile and three-quarters N.E. $\frac{1}{4}$ E., is the Castle of *Frangerola*, at the top of a little hill; under which is anchoring ground, in from 7 to 9 fathoms, off a low beach, or farther off, if more agreeable, in 10 and 12 fathoms. Water may be obtained from a river a little to the N.E. of the castle.*

We now approach the elevated and rocky shore to the north-eastward of the Bay of Frangerola, and which terminates the Sierra Mijar and Sierra de Junquera. The *Torre Blanca*, (White Tower,) stands a mile and three-quarters N.E. $\frac{1}{4}$ E. from Frangerola Castle; and eastward, at about $2\frac{1}{2}$ miles from Torre Blanca, stands *Torre Quebrada*, on a projecting point. Between these towers stands another, *Bella Almadena*, northward of which is the town of the same name. At a mile beyond the tower last mentioned, and at some distance from shore, is a sunken rock, about the size of a ship's hull, with 9 feet over it, and on which several ships have struck.

The TORRE BERMEIA is a mile and a quarter from that of Bella Almadena. The rock just described lies about half a mile to the southward of it. At a cable and a half eastward from Torre Bermeia, is the Point of Saltillo, with a ledge of rocks extending about two-thirds of a cable to the S.E. Between this point and that of Torre Quebrada, to half a league seaward, the bottom is of rock, and the water deep.

The Castle and Point of Torre Molinos lie half a league N.E. by E. from Torre Bermeia. The point is low, and lies in lat. $36^{\circ} 37\frac{1}{2}'$. Here ships may occasionally anchor, on the tract of ground, off the low shore, extending hence to Malaga.

MALAGA, the MALACA of the antients, stands in latitude $36^{\circ} 43\frac{1}{2}'$, and longitude $4^{\circ} 24' 15''$ W. This port is now distinguished by a light-house, which exhibits an excellent revolving light: each face shows seven reflectors. When seen from a distance, the light is obscured for three-quarters of a minute, and a very bright light succeeds for 15 seconds; it thus revolves in every minute, or, at least, brightens and obscures in that time. The light may be distinctly seen at the distance of about six leagues.†

From the Point of Molinos, the distance to Malaga is $2\frac{1}{2}$ leagues: nearly midway between is a projection of the coast, apparently formed by the stream of the Rio Gordo, which extends a mile outward. Vessels from the westward for Malaga, should pass the Point of Molinos at the distance of a league, and thence steer so as to keep the town of Malaga on the larboard bow, which will lead them clear of the bank. The lantern on the Mole bearing N.N.E. [*North*,] will lead clear of all danger, or not approaching nearer than in $6\frac{1}{2}$ fathoms.

In making Malaga, from Point Molinos, with the wind at S.W., so soon as you have cleared the Point of Rio Gordo, you will generally find the wind drawing more and more from the land. Ships of the line ought not to run for the Mole of Malaga when it

* Frangerola Castle is antient, and has five or six small towers.

† "MALAGA is esteemed the second port in Spain, and is celebrated for its excellent wines, the rich *Malaga*, the *Mountain*, so called from the hills which produce the grape, and the *Tent*, or *Tinto*, so styled from its deep red tinge. Malaga stands in a valley, surrounded with hills, the houses high, the streets narrow and dirty. Inhabitants, about 40,000."—Townsend.

blows hard from the South or S.W., which would only expose them to danger; but with the wind strong at S.E. or East, they may bring up, by letting go two anchors, as closely as possible to the Point of the Mole; so that, by veering out only half a cable on each anchor, they will be able to ride it out: but, without that security they must be lost. It is clear, however, that they should not stand for the Mole, unless in a case of emergency: it will be much safer, if possible, to keep out to sea.

Within the Mole, which is on the eastern side, there is water sufficient for ships of the line, but they must lie moored head and stern, parallel to it. In the Road, which is about a mile from the Mole-Head, there is a depth of 8 and 10 fathoms, on muddy ground.

Malaga may be readily known from sea by an old castle, which stands on a hill behind the town, having white walls, which communicate with the town: these walls are distinguishable at a great distance; and, on a nearer approach, you may distinguish the great church, which stands in the middle of the town, near the sea-side.

*Captain Livingston has described Malaga, &c. as follows: "MALAGA is a large town, irregularly built; its most remarkable object, on advancing from sea, is the superb cathedral, with a tower or steeple of 110 varas (Spanish yards) in height: this building is coloured yellow, and directly faces the entrance of the port. The next most remarkable object is the Custom-house, which stands nearly true South from the Cathedral; it is a very large building, and looks much like a barrack. Many of the finest buildings in Malaga, including all those on the *Alameda*, a public walk, are built on ground which has been gained from the sea. The *Alameda* is a very handsome place, (south-westward from the cathedral,) with a row of trees on each side of it, outside of which is a carriage-way, then a low wall, and again a paved carriage-way, with very handsome houses.*

To the eastward of Malaga cathedral there rises a hill or mountain, on which stand the remains of the Moorish castle of *Gibralfaro*, once a place of considerable strength, and all the walls being white, it forms, out of the town, fully as conspicuous an object as the cathedral does in it; and the steps or road, between walls, leading up to it, appears, from a distance, like a large open stair-case.

On the 19th of September, 1820, at 11 p.m. Captain Livingston sounded in 23½ fathoms, when Malaga light bore N.E. (by compass) distant about three-quarters of a mile: and at a little after midnight they anchored, in 18 fathoms, the light bearing N.N.E. nearly a mile.

A shoal has grown up about the mole-head of Malaga, extending S.W. inclining to West; but it crowns or surrounds the whole point to the distance of one-sixteenth of a mile. At the point you have about 14 feet, and immediately ground. The harbour, as well as that of Barcelona, is growing up. At present there is more water inside than in the entrance of the channel, which has 30 feet, but is narrow. The harbour was injured by the French, who allowed ballast to be hove into it. The best anchorage in the Bay, without the harbour, for large vessels, is in 11 fathoms, with the lighthouse and tower of the cathedral in a line."

Those intending to anchor in the Road of Malaga, should come-to, eastward of the meridian of the Mole, advancing with caution, as there is a depth of 10 fathoms very near it. Here you may remain, at single anchor, so as to be ready to get under sail, in case the wind should change to East or S.E., whether to weather Molinos Point, or to run within the Mole.*

* The following General Directions for Malaga have been communicated by a Captain of the British Navy:—

"The only danger, in proceeding for Malaga, is the low sandy point of the Rio Gordo, between Molinos and Malaga, which runs off very shoal to the distance of a mile and a half: the sea breaks on it in blowing weather; the flood-tide sets directly on it; therefore, with light winds, it would be advisable to anchor, in order to avoid getting on-shore; but, at the distance of 4 or 4½ miles from the Mole-Head, you have no soundings. As you approach the Mole-Head, within a mile, or a mile and a quarter, you will have 20 fathoms, shoaling thence, gradually, to 8 fathoms, which depth you will have within a cable's length of the Mole-Head.

"The tide flows here at XII h., full and change, and rises about 3 feet; the current runs along shore about 8 hours each way. The flood sets to the westward. The best anchorage is in 11 fathoms, the Mole-Head N.E. ¼ E. distant about two-thirds of a mile, sandy bottom. All ships, in stormy weather, unless it blows hard from the northward, must go into the Mole, as with any other winds they cannot lie out in the Road with safety."

FROM

FROM MALAGA, EASTWARD, to the distance of about 4 miles, the coast is elevated, and has several watch-towers on it, called the *Cantales*: it then falls into a low beach, to beyond the town of Velez Malaga, or Old Malaga, which is $4\frac{1}{2}$ leagues to the eastward of Malaga. All along the low shore vessels may anchor, during summer, as the ground is clear. In the eastern part of the beach of Velez Malaga, a river, forming a sand-bank, falls into the sea; it stretches, however, but a short way out, so that there is sufficient depth for vessels to pass within half a mile of the shore.

VELEZ MALAGA.—The town of Velez Malaga stands in an elevated situation, at a league inland. In the middle of it are two large steeples; and, on the right, a kind of castle on a little eminence, in the middle of a very fine plain, with several gardens in it. Nearly opposite the town, near the sea-side, at the foot of two little mountains, is a small fort, with some fishermen's cottages, against which you may anchor in 8, 9, 10, 12, or 13 fathoms of water. The anchorage is very convenient for all vessels, and sheltered from the wind at West, in 11 fathoms, bottom of sand and chalk; but it will be proper to have a warp out to the S.E., to heave on, should it be requisite to get under sail, with the wind in that quarter.

The preceding description is from *Tofino*. The following is that of *Captain Livingston*.

This city is situated on the east side of a valley, the first of any importance to the eastward of Malaga, and which has an agreeable and romantic appearance, although the summits of the hills which rise in it, (lower than the mountain range,) appear scorched and almost destitute of vegetation, while the summits of the surrounding mountains, shooting their bare craggy peaks into the clouds, in a thousand fantastic forms, are singularly picturesque, nay even partake of sublimity. The appearance of the city is, likewise, extremely picturesque, and may almost compete with that of the Old Town of Edinburgh. Three spires or towers are the most remarkable objects from sea-ward; the one which stands lowest on the slope is of a red colour, (probably built of brick,) the other two are of a dirty white; the highest of all seems to be a tower, square at top, and attached to a church, castle, or convent, on an eminence that commands the town, but insignificant in comparison with the surrounding mountains.

On the east side of Velez is a sweet little valley embosomed in the hills on three sides, but open to the sea, with neat clean-looking villas and groves of orange and lemon trees, &c. At the entrance of this valley stands the *Torre de Mar*, or Sea-tower, near to which, on the east, is a smaller tower, inclining much to one side, like the hanging tower of Bridgenorth, in England.

To the westward of the anchorage of Velez is a singularly stratified mount, the rocks of the strata being whitish coloured, like chalk; and at the west end of the mount a break looks like a chalk-pit, or quarry of white stone, while under the strata, at the east end of the mount, the ground looks like a sand-hill. In front of the mount, that is between it and the sea, stand one or two small houses and a round tower; to the eastward of it stands a very conspicuous white house.

When Velez Malaga bears about N. by E., (by compass,) the low ground in front of it, with thick groves of trees of the richest verdure, the fine appearance of the city itself, the neat looking villas surrounding it, and the high picturesque mountains encircling the whole, form a landscape hardly to be equalled. Two small villages or hamlets stand between Velez and the shore, the easternmost of which seems to have a church. Down the valley, to the westward of *Torre de Mar*, is the bed of a mountain torrent, at times dry or nearly so.

At N.E. by N. [*N. by E. $\frac{1}{2}$ E. true,*] the two principal towers or spires of Velez Malaga are in one, and when they bear so, the shore being distant about half a league, the highest tower, as seen through the telescope, appears to be part of the remains of an old fortress, (probably Moorish,) situated on a rocky mount.

The mouth of the river of Velez Malaga, falling from between two mountains, may be distinguished by the low land between the mounts and a grove of high trees, apparently forest, on the banks of the river; while all the other trees, or almost all of them, appear to be fruit trees. The bank of soundings, in sun-shine, may be clearly distinguished, running out from the mouth of the river, as the water on it is quite green. With the mouth of the river, however, bearing about N. by E. $\frac{1}{2}$ E. [*N. $\frac{1}{2}$ W.*] about a mile distant, we got no bottom with 16 fathoms, though the bank evidently ran about a mile outside us.

TORROS.

TORROS.—At 8 miles E.S.E. $\frac{1}{2}$ E. [*E. 6° N.*] from the point of Velez Malaga, is the point and castle of TORROS. The land between continues low, and there is anchorage westward of the point, in 10 or 11 fathoms, with off-shore winds. Thence to NERJA, a league eastward, the coast is high and precipitous, without beach. The road of Nerja protects all vessels during winds from West and N.W., in 12 fathoms, bottom of sand; but, as it is open to the East and S.E., it is necessary to have an anchor out to the S.E. to heave on, should the wind happen to change. Plenty of water may be had here, but its conveyance is troublesome.

HERRADURA, or Horse-shoe Bay, 7 miles to the eastward of the castle of Torros, is a small bay, having a watch-tower on each point. The distance between these points is a mile and two-thirds, and the depth to the bottom of the bay more than a mile. Here is a castle on the beach. Vessels may occasionally stop, but must be ready for a start, in case of an adverse wind; as, in such case, the only resource is to run to the beach at the bottom of the bay, in order to save the crew; the other part of the coast consisting entirely of rocky precipices, which overhang the water. Good water may be had from a well within the castle.

Eastward from the road of Herradura, the coast is high and rocky. A bay, called *Berengueles*, affords occasional shelter, but it cannot be recommended to a stranger. To the East of this is ALMUNECAR, a small town, before which there is an open roadstead, to be used only in case of necessity, as East and S.E. winds blow very frequently and strongly here, especially in the winter.

A round watch-tower distinguishes Almunecar, and there are several other watch-towers on the coast to the westward. Eastward of Almunecar Point is an islet, with a small fort on it: on the east of this is anchoring ground, 12 fathoms, oaze and sand.

VELILLA.—The TOWER of VELILLA, or BELILLA, stands on a high point, $2\frac{1}{2}$ miles to the eastward of Almunecar; on its eastern side is a small bay, with anchorage, but there are several rocks about it, off a cultivated valley. This road, like others latterly described, is open to the East and S.E.

WINDS.—INDICATIONS of EAST and S.E. WINDS.—By attention to the weather on this coast, it may commonly be known when these winds are coming on: for, when the horizon is overcast in those quarters, with thick whitish clouds, it may be considered as almost certain that the wind is about to blow from those points of the compass; and, as the commencement of the gale, although of short duration, is gentle, there may be time to get under sail before it freshens or draws round to the S.E., and it will be necessary to ride out the gale, which sometimes blows very violently for several successive days.

FROM VELILLA, EASTWARD, the coast is of moderate height, until terminated by the open shore of Salobrenna, a small town, (*the Salambra* of the antients,) to the southward of which is a rocky islet, at the distance of $3\frac{1}{2}$ miles from Velilla. Between, are two watch-towers on the heights. The beach of Salobrenna is formed by the *River Motril*, the extremity of which forms a projecting point, under which ships may lie sheltered from easterly winds, all along the beach, in from 8 to 16 fathoms, mud, particularly under the Pennon or islet. From this spot, with the wind at west, a vessel may clear the point of the river; and, at the distance of half a mile, find a depth of 18 fathoms. With a S.W. wind, blowing on shore, there is no room to cast a ship; and, in winter, that wind commonly throws in a great sea. At the foot of the islet, on the north side, close to the sea, is a plentiful spring of fresh water.

FROM THE RIVER MOTRIL, the coast continues low to CAPE SACRATIF, or the POINT of CARCHUNA, which lies in latitude $36^{\circ} 41'$, long. $3^{\circ} 27\frac{1}{2}'$ W., at the distance of 8 miles. In the interval stands the castle of the Barradero of Motril, at above 4 miles from the river, and 2 miles S. by E. true, from the town. Three miles farther is a tower on the beach, with two guns. There is anchoring ground along shore hereabout, but no shelter. The country is pleasant, being covered with gardens and sugar-canes. MOTRIL is a large town, about 2 miles from the sea, in a fine plain: it has several convents and churches, which are seen on sailing along, with some groves to the westward: by the sea-side are several cottages of the fishers, with large trees behind them.

CAPE SACRATIF, or POINT of CARCHUNA.—This headland, which has a round watch-tower on it, is the highest land of all this coast, rugged and steep. On its eastern side is the *Cala del Chucho*, a small cove, defended by a tower with one gun, beyond

beyond which, to the eastward, stands the castle of Carchuna; and, beyond this, on a projecting point of sand, is the tower *de los Llanos*, or of the Plains. The coast hereabout is foul, and there are several rocks near the land. The whole plain hither from Motril is uninhabited.

The coast again consists of high and rugged precipices to *Point Melonar*, which is a league and a half to the eastward of Cape Sacratif, and has a watch-tower on its summit. Hence, at seven-tenths of a mile E.N.E. $\frac{1}{2}$ E., is the *Castel de Ferro*, on the top of a hill, at the base of which are two spots of low shore, before which is a good road during winds from N.W. to West; but, when it blows hard, they drive, as the ground, from this place, is of loose mud; and, with a S.E. wind, it is impossible to clear the land on either tack. To the east is an open beach, *Cambrilis*, with a tower having one gun. This place is resorted to by vessels coming to load with *sparto*, a species of grass or mat-weed, employed in making cables, &c.; but it presents no advantage as a place of general resort, and may be highly dangerous with an on-shore wind.

RABIDA.—About 9 miles E.S.E. $\frac{1}{2}$ E. from the Castel de Ferro is the small town and castle of *Rabida*, which are $2\frac{1}{2}$ miles to the eastward of *Punta Negra*. The coast, having several watch-towers on it, continues in a true East and West direction, and is, in several places, foul and rocky. At about 5 miles E.S.E. from La Rabida, is the watch-tower of Guarca. The coast still continues high to ADRA, (the antient *Abdera*), about 3 miles more to the eastward, where there is shelter for ships of any burthen, along the beach, in winds from East, by the North, to N.W. Nearest to the town, the depth is from 7 to 8 fathoms, with good holding ground, the castle bearing N.E. by N. at about $2\frac{1}{2}$ cables' length from shore. Water may readily be obtained here.*

FROM the point forming the RIVER of ADRA, the coast eastward is low, and forms a bay, in the bottom of which is the Tower of *Aljamilla*, near which are several rocks. From the Tower of *Aljamilla* the low coast trends S.S.E. $5\frac{1}{2}$ miles; and, nearly midway between, is the Tower of *Belerma*. Vessels of every description may anchor between this tower and the S.E. point, *El Moro*; but a S.W. wind blows directly on-shore.

On the Moro Point, which is higher than the other part of the coast, stands the Castle of *Guardias Viejas*, and here commence the LLANOS or PLAINS of ALMERIA. The coast hence eastward, to the distance of $2\frac{1}{2}$ leagues, trends nearly E.S.E., [East] and a considerable part of it is rocky near the shore; and in some parts are breakers, with the wind on shore, to the distance of two leagues from the land. The greatest projection is near the Moro Point, at the distance of a mile from which are $5\frac{1}{2}$ fathoms, over a rocky bottom. *Point Sentina*, a projection of the beach, at $3\frac{1}{2}$ miles eastward from the Moro Point, has a tower with two guns. The rocks before it extend about half a mile to the southward, and just without them is a depth of 7 fathoms.

The Tower of *las Sentinas* stands in latitude $36^{\circ} 41'$, and longitude $2^{\circ} 48\frac{3}{4}'$ W. The *Punta del Sabinal* is rather more than $3\frac{1}{2}$ miles to the eastward of it, and E. by N. from the latter is *Punta de Elena*; both are low and flat, but between them is a watch-tower, *Los Cerrillos*.

From Point Elena, northerly, $2\frac{1}{2}$ miles, to the Castle and Round Tower of *Roquitos*, the coast continues low, and affords anchorage for any vessels during S.W., West, and N.W. winds. They may come-to in any spot after passing the parallel of the castle, but the common anchorage is in 16 fathoms, coarse sand, about a mile to the east [E.N.E.] from it: they may run in, closer to the land, to 7 or 8 fathoms, but will be there more exposed to southerly and easterly winds, which are mostly prevalent here. The village of *Roquetas* lies above half a mile to the N.W. from the castle, and there is a rocky patch, of 9 fathoms, which bears from the Castle E. by N. [N.E. by E.] about six-tenths of a mile.

BAY of ALMERIA.—At $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ N. from the Castle of *Roquetas* is the Tower of *los Bajos* or *Bajos*, having two guns. This tower has its name from some sunken rocks which lie about it, forming a kind of basin, which admits small vessels, and having a depth of 2 fathoms, sandy bottom. Its entrance is towards the south. On the north of the tower of *Bajos*, the land rises to a considerable height, becomes

* Up in the country are the mountains of Granada, which commence near Velez-Malaga, and end hereabout. They are always covered with snow and fogs.

steep towards the sea, and thus it trends to the eastward to the *Point of Garrofa*, distinguished by a tower, distant from that of Los Bajos about 4 miles E. by N. [*N. 57° E.*] Another tower, *Rambla Honda*, stands at a mile and a half to the N.E. from that of Garrofa, whence the coast trends East $2\frac{1}{2}$ miles, still continuing high to the *Point of Torrejon*, the western extremity of the Road of Almeria, and having a small fort.

ALMERIA, the antient *Murcis*, was once the most commercial city of Spain, but it has latterly been reduced to comparative insignificance, and its exports are chiefly barilla and lead. The position is, lat. $36^{\circ} 51\frac{1}{2}'$, long. $2^{\circ} 31' 33''$ W. From the town to the river, the shore trends to the S.E. by E. nearly two miles. During an easterly wind, vessels are best protected here by mooring to the S.W. of the bastion of La Trinidad, at the east angle of the city, in from 14 to 9 fathoms, bottom of sand, at about half a mile from shore: the best general station is, however, to the W.S.W. or West [*W.S.W.*] of the same bastion, in from 9 to 8, 6, and 5, fathoms: the latter opposite to the barrack of the guards, where a cable may be made fast on shore.

There is anchorage in the Bay in 14 fathoms, bottom of blue clay, with the church N.E. by E. and Punta del Rios N.E. $\frac{1}{2}$ E. This may be a useful spot during a westerly wind.

Much of the anchorage is strewed with ballast-stones, which have, from time to time, been thrown overboard from vessels resorting to this port. These must be guarded against, as they are injurious to cables. From the fountains in the town, plenty of fresh water may be obtained.

From the sandy flat at the mouth of the river, the coast continues low to the distance of $3\frac{1}{2}$ miles E. $\frac{1}{2}$ N., and forms the bottom of a bay larger than that of Almeria; but the whole is foul, and affords no anchorage. There are four towers on the beach, the last of which is that of *Garcia*. At about 3 miles from the latter, S.E. by E. $\frac{1}{2}$ E. [*S. 43° E.*] is that of *S. Miguel*, where ships sometimes bring-to, for shelter from easterly or Levant winds. From this spot to *Cabo de Gata*, or Cape de Gat, vessels may anchor any where, with the cape bearing from S.S.E. to E.S.E., the bottom, all along, being of sand, with 18 to 8 fathoms of water, within three cables' length from shore. The road, however, should be used only in case of necessity, as it is, from its situation, very dangerous during a S.W. or on-shore wind; and vessels here must get under way on the first indication of its changing to that direction.

CAPE DE GAT may be readily known by the *Torre de la Testa*, a watch-tower on its summit, in latitude $36^{\circ} 44'$, and longitude $2^{\circ} 13'$ W. At half a mile from the tower of La Testa, on the east, is the castle of *S. Francis de Paula* or *Corralete*, on a hill, which is perpendicular towards the sea: a lofty islet is close to it, with many steep rocks. Hereabout are many cross currents, which seem to be governed solely by the wind, and which add to the dangers of the coast. Among the latter is a rock of white marble, at half a mile S. 4° E. [*S. 26° E.*] from the castle, with only 9 feet over it. There is a passage between it and the shore, with 6 and 7 fathoms, but it is not safe with a scant wind, unless to those perfectly acquainted with the coast.

From the castle of Corralete, eastward, the coast continues lofty, to a tower on the peak of a hill, *Vela Blanca*, so named from a white spot towards the sea, which may be discerned at a considerable distance. At $3\frac{1}{2}$ miles, eastward, from this tower, is the *Castle of S. Josef*: the coast between is generally high and precipitous, with only one small spot of beach, *Port Genoves*, which is occasionally made use of by small vessels. The castle of S. Josef is seated on a hill of moderate height, and on its eastern side is a cove, affording anchorage in 6 or 7 fathoms, but exposed to flaws and gusts of wind from the high land on the west, and to the winds on the East and S.E.

The *Tower of Cala Figuera*, at about a mile and a half N. 47° E. *true*, from the castle of S. Josef, takes its name from a small creek, which affords occasional shelter from easterly winds. Hence to the north-eastward, about one mile, the coast is high and steep. Here we come to a point, on which are two pyramidal hills, called the *Frayles* or Friars of Cape de Gat, and which constitute the first land seen hereabout on coming in from sea. Beyond this, to the northward, is the Bay of *Mahomet Arraez*, distinguished by the castle of St. Philip.

During West and S.W. winds, vessels may occasionally anchor here: the best spot is off the eastern side of the castle, in 12 fathoms, coarse sand; but the place is quite open to the East, S.E., and South: hence it is resorted to in the summer only.

POLLACRA

POLLACRA POINT and **TOWER** stands at the distance of 5 miles to the north-eastward from the tower of **Figuera**. An islet close by it appears at a distance like a ship, and on it is a high round hill, *Cerro del Lobo*, surmounted with a tower. The coast now trends to the north, forming several small points and bays.

The castle of *S. Pedro* stands at about 3 miles to the northward from the *Lobo* tower, on a little bay, or indent, which contains the best anchorage about this coast. On the S.E. of the castle, at the distance of a cable and a half, are 7 fathoms, with sandy bottom, where a vessel may ride safely with the wind at S.W., West, and N.W., North, and East: for, although it is open to the S.E., it has been found that the stronger the wind blows from that quarter, or from east, without the bay, the more does it blow off shore within, so that the only inconvenience is a little swell of the sea from without. The breadth of this cove is but half a mile, and the depth is less, so that it can hold but a small number of vessels. The shore is hilly and steep, with only one spot of beach under the castle, which stands so high as to command the road. Vessels lie with a cable on-shore to the N.E., and an anchor out to the S.W. There is a spring of good water near the castle, but it cannot be conveyed, without some trouble, down to the beach.

LA MESA de ROLDAN, a high promontory of table-land, on the plain summit of which is a tower, stands at the distance of 3 miles to the north-eastward of the east point of *S. Pedro*. There is a small cove within it, on the west, wherein coasters sometimes find shelter from easterly winds, but it is open both to the S.E. and S.W.

From the *Mesa* Point the coast trends *N. 6° E. true*, about 3 miles, with an open beach along shore. Here stand the castle, village, and islet, of **CARBONERA**, commanding a road well defended from the West and S.W. Vessels may anchor in any part of it, on a clean sandy bottom; but the most usual place is in 24 fathoms, at about a mile to the southward from the castle, or from the islet. But it is to be noted that, with a S.E. wind, there is no room for vessels to cast off here, in getting under way, so that they must ride it out.

The **ISLET** of **CARBONERA** lies nearly half a mile to the south-eastward from the castle: the channel between is narrow, and has not, in some places, a greater depth than 2 fathoms.

MOXACA.—On the elevated land, at half a league to the northward of *Carbonera*, is a watch-tower, called *Torre del Rayo*. From the *River Dalias*, a brook to the northward of this tower, if weather permits, a supply of water may be obtained. The next tower, northward of this brook, stands on a large rock, and is thence called *Torre del Penon*. Another, 2 miles more to the N.E., is called *Masenas*. Here the coast again becomes low and sandy to the *Punta del Cantel*; $2\frac{1}{2}$ miles beyond which, to the northward, is the town of **MOXACAR**, situated on the top of a hill, one mile up from the shore: behind this are the high ridges of *Cabrera*, the highest of this part of Spain, which may be seen from *Cartagena*, or about 18 leagues off.

From **MOXACAR**, in latitude $37^{\circ} 6'$, the coast continues low, for $2\frac{1}{2}$ miles, to the castle of *La Garrucha*, on the beach of the town of **VERA**, which stands *N.W. by N. true*, 3 miles from the castle, and nearly as much from the nearest shore. No particular anchoring ground can be recommended here. As the coast forms a bight in this part, the currents so run, at times, in contrary directions, as to form a whirlpool or race, an approach to which may be embarrassing, if not dangerous. The Spanish survey represents the town of *Vera* in $37^{\circ} 10' 30''$.

RIO DE CUEBAS.—A small river, the *Rio de Cuebas*, falls into the sea in lat. $37^{\circ} 12'$. Here the land again becomes high, and so continues to the north-eastward $4\frac{1}{2}$ leagues, or rather more. On the north side of the *Cuebas* is the tower of **Villaricos**. Here foreign vessels from *Cartagena* frequently take in barilla, riding at anchor in all winds excepting from the east. Northward of *Villaricos* commence a chain of mountains, the *Sierra de Villaricos*, which, although not very lofty, present a number of peaks, and extend to the point of the same name, a distance of $5\frac{1}{2}$ miles. The coast continues high, and nearly in the same direction, with a few projecting points $5\frac{1}{2}$ miles farther, and to the castle of *S. Juan de los Ferreros*. The latter is seated on a hill of moderate height, and steep toward the sea; there is a little cove on the west side of it, which is resorted to for barilla, &c.

From the **CASTLE** of **S. JUAN**, to the N.E., the coast is of moderate height, but irregular, to the distance of $4\frac{1}{2}$ miles. Here we arrive at the castle and Port of **AGUILAS**,
in

in which frigates and smaller vessels may be sheltered from S.W. and West winds, in $5\frac{1}{2}$ fathoms of water, but the bottom in some spots is foul. At about 5 miles E. $\frac{1}{2}$ S. [N. 72° E.] from Aguilas Castle, is the elevated promontory called *la Cabezo de Cope*, in lat. $37^{\circ} 24'$, long. $1^{\circ} 33'$ W. This headland extends above a mile to the north-eastward; it is precipitous and steep-to, but forms two anchorages, of which that on the west, *Cala de la Bardina*, will shelter many ships during an easterly wind; within two cables' length of the beach are 8 fathoms, bottom of sand. Within a cable's length of the north side of the hill are 13 fathoms, sea-weed, with some spots of sand, and some loose stones. The Almadrava or Tunny fishery is prosecuted annually in this bay; and there are shell-fish, frequently adhering to the stones, which sometimes injure cables. The south is here an on-shore wind, but it seldom blows, excepting in the winter season.

The anchorage on the N.E. side of the Cabezo or Head of Cope, is sheltered by the land from S.W. and Westerly winds. It has a good depth of water, with bottom of sand and sea-weed. Should a storm be coming on, if not from the N.E. or S.E. quarters, a vessel may take refuge here, but must bring-to according to circumstances. The coast hereabout is uninhabited, excepting the tower of Cope, which has two guns.

Rather more than a league to the N.E. from Cope Head is the *Cala Blanca*, a little cove, which admits small vessels. The coast thence trends more to the eastward, about $3\frac{1}{2}$ miles, to the rocky point *Calnegra*, which has a flat beach on each side, exposed to the S.E. The shore hence is of moderate height, to the distance of $5\frac{1}{2}$ miles, where a point stretches into the sea, and forms a broad black head, with white spots on it, named *Cueba del Lobo*. Beyond this, to the east, an open beach forms a bight, more than 3 miles broad, to the tower of ALMAZARRON, where another and more extensive bay commences.

ALMAZARRON.—The eastern part of *Almazarron Bay* is lilly, and on its point is a tower, *La Subida*, which gives name to that part of the road. Here is excellent shelter from an Easterly and even a S.E. wind, to the northward of the tower, in $7\frac{1}{2}$ fathoms, bottom of sand, distant about one-quarter of a mile. This is a convenient spot for vessels, which, having left Cartagena, are overtaken by an easterly wind. The bottom is clean; so that half the road, at least, may be used by ships under such circumstances. The winds from West, S.W., and South, to which the bay is open, are easy in the summer, but in winter dangerous, as they prevent vessels from casting off and getting under way.

The western part of *Almazarron Bay* is convenient, as an anchorage, during winds from West to South; but those from East to S.E. send in a heavy swell. The most convenient situation for large vessels is on the N.E. side of the tower, upon the west head of the bay, at the distance of about a cable's length, where a cable is made fast on shore to the rocks, with an anchor out to the eastward. Here is a depth of $7\frac{1}{2}$ fathoms. At about half a mile N.E. $\frac{1}{2}$ E. from the tower, is a patch of rocky ground, having 9 fathoms over it, but dangerous to cables; and there are two rocks above water, with foul ground about them, within the bay. The village of ALMAZARRON stands at about a league inland, to the north-westward.

CAPE TINNOSO.—From the CAPE of LA SUBIDA to CAPE TINNOSO, which is high and precipitous, the coast trends East, about $2\frac{1}{2}$ miles. This cape lies in latitude $37^{\circ} 31'$, and bears from Cope Head East [N. $69\frac{1}{2}^{\circ}$ E.] $19\frac{1}{2}$ miles. Beyond Cape Tinnoso the land takes a northerly direction, $3\frac{1}{2}$ miles; the greater part hilly and steep, until terminated by the small and low beach of *Portus*, to the N.E., at $3\frac{1}{2}$ miles from the cape. From *Portus*, on a true East direction, the distance to the entrance of Cartagena Harbour is $5\frac{1}{2}$ miles. The coast between is high.

Not far to the eastward of *Portus* is the commencement of a hill, the *Cabezo de Rolandan*, which is descried from a greater distance than any other part of this coast. At the foot of this hill, and one-quarter of a mile from shore, is an islet, *Las Palomas*, surrounded by foul ground. At $3\frac{1}{2}$ miles eastward from *Portus* is another small island, *Torrosa*, very near to the shore, and two miles to eastward of which is the western point of the Harbour of Cartagena.

CARTAGENA (NOVA CARTHAGO of the antients).—The western point of the Port of Cartagena, *La Podadera*, is of moderate height, and has a fort on its summit. Close to the land, which is very steep, is a depth of $7\frac{1}{2}$ fathoms. About one-third of a mile to the north-eastward of *Podadera Point* is the point and fort *Navidad*; and opposite to this, on the eastern side of the harbour, is the point and battery of Sta. Florentina.

This

This is the narrowest part of the harbour, which is here little more than one-third of a mile broad.

Within Fort Navidad, and towards the north, is the *Grand Espalmador*, or Great Careenage, forming a small bay of 550 yards over, and having a depth of $5\frac{1}{2}$ to $4\frac{1}{2}$ fathoms: it is the common anchoring-place for all ships of war. Off this place, at a quarter of a mile to the eastward, is the Harbour Shoal, *La Laxa*, a small reef, over which the depth is only 2 feet, and steep-to all round. With a wind blowing fresh inward, the sea breaks over it.*

In the N.W. corner of the harbour is the Royal Arsenal, to the east of which is the City of Cartagena, in latitude $37^{\circ} 35' 50''$, and longitude $1^{\circ} 0' 37''$ W. The suburb of Santa Lucia extends down the eastern side, which forms a small bay, having, on its south point, a powder-magazine, whence the shore becomes hilly to the battery of Sta. Florentina, already noticed. The harbour is one of the best in Spain, being a natural basin, surrounded by hills. The arsenal is spacious, and protected by forty guns towards the water. The population is estimated at about 30,000. The principal exports are wool and barilla.

When a ship bound to Cartagena is off Cape Tinnoso, with a westerly wind, she should run along shore at a good distance, or about half a league, until she arrives at the Point of Podadera, and thence run northerly, along the western shore, at the distance of half a musket-shot, whence she may come to anchor in the Careenage already described. With a wind from the eastward, attend to the directions hereafter.

TO ENTER the PORT of CARTAGENA from the EASTWARD, &c.—When a vessel is near, or in sight of, Cape de Palos, and bound for Cartagena, with the wind at East, she may keep along shore, at a reasonable distance, until she has advanced to the little isle *Escombrera*, which lies without the eastern side of Cartagena. Having passed the south side of this isle, at the distance of a cable and a half, she should run to the West [*W.S.W.*] until Fort St. Anne, on the east side of the entrance, bears N.E. or N.E. by N. in order to clear a sunken rock, which lies about one-fifth of a mile from *Escombrera* Island.† Now haul to the northward as much as possible, until the ship's head bears on the Fort *Trinca Botijas*, which is the first on the east shore of the harbour, and situate on an eminence. Do not approach too near to this shore, because it is foul; and it is requisite to be the more cautious, because the wind draws more out of the harbour hereabout than farther off. It will, nevertheless, permit you to make over to, or even within, Fort Podadera, on the western side, whence you may come to an anchor in $7\frac{1}{2}$, 8, or 9, fathoms; and thence, sending out an anchor, warp up within the harbour: for to turn in, when the wind without is at East, is both tedious and dangerous, even to a good-sailing ship.

From off Cape Palos, with a westerly wind, a ship for Cartagena must beat up to windward until the middle of the harbour bears due North, *truc*: thence, as already explained, she may run up within half a musket-shot of Fort Podadera, and along the western shore to the Careenage or anchorage.

CURRENTS, &c.—Off Cape Palos there is commonly a current setting to the south-eastward, with some degree of force; and most so farther out. The coast between this and Cartagena is so far clean, that vessels may approach it within half a mile: but, it is to be observed that, near Cape Tinnoso, the current frequently sets into the Bay of La Subida, on the west; and the probable effect is to be obviated only by requisite precaution.

Winds from the S.W. quarter, here called *Birazonas*, are, during the summer, very regular in the Port of Cartagena, from 10 a.m. until sunset: and, in winter, they blow throughout the night. To sail out of the harbour, it is necessary to weigh in the morning, with land-breezes, which, in moderate weather, generally last till 8 or 9 o'clock.

ANCHORAGE AT CARTAGENA.—Having entered the harbour, according to the preceding directions, and left the shoal *La Laxa* at about a cable's length on the starboard side, you may come to an anchor in 6 fathoms, bottom of mud; and, veering out two-

* This description will be clearly understood by referring to the particular plan of the harbour, which is given on the Chart.

† This is a rock, having only 10 feet over it, about the size of a ship's long-boat. Close beside it the depth is from 7 to 9 fathoms.

thirds of a cable, carry out another anchor, with two cables, to the north-eastward, so as to remain moored N.E. and S.W. The common practice is, after having let go the first anchor, to make fast a cable's end to a point of the rocks on shore; and then, having carried out another anchor to the N.E., to weigh the first, and remain with it, ready to be let go again.

If warping in, with a scant wind from the N.E. or N.W., or even between the East and S.E., first let go an anchor, with two cables, to the N.E.; and, veering away what may be necessary, carry the warp to the S.W., on which let go another anchor, or make fast a cable's end to the rocks on shore, as described above.

TO ANCHOR IN THE BAY itself, with any wind, first gain the middle of the entrance, and then steer, on the east of the Harbour Rock, directly towards the *Student's Cave*, or *Grotto*, which is on the projection upon the N.E. side of the harbour. Here, with the wind from seaward, let go the anchor, with two cables, in 6 fathoms, muddy bottom; and, immediately running out another anchor to the N.W., you will thus remain moored N.W. and S.E. With the wind off the land, let go the first anchor to the N.W. and the next to the S.E. In summer, it is usual to anchor here; for as, in this season, the winds are not strong, the cables do not suffer much. In this situation, the air will be found to circulate freely, which is not the case on the side of the harbour, close under the hills.

During the winter, large ships should always be moored in the *Grand Espalmador*, where they lie securely protected from winds and the sea. This bay will not, however, permit more than three men of war to swing round on their anchors: but as many as ten may be accommodated in it, moored head and stern, with four anchors. In the Canno, or Little Careenage, more to the North, upwards of twelve may be placed, made fast to each other, two by two. Should you, when making the harbour in winter, meet with the wind off shore, from N.E. to N.W., which is sometimes the case, you should endeavour, by turning to windward, to gain an anchoring berth on the north side of the island Escombrera, in any depth not exceeding 27 fathoms. Here you may lie securely, on good holding ground.

There is anchoring-ground all over the opening of the harbour, as far as the middle of Escombrera Bay. In winter, or with a north wind, it is, however, safest to get under the lee of the points on the western side, between the forts Navidad and Podadera.

ESCOMBRERA BAY, the large inlet on the eastern side of the entrance of Cartagena Harbour, is sufficiently extensive to shelter several large squadrons, during winds from the N.E., S.E., and N.W.: the bottom being generally clean, and the depths from 15 and 14 fathoms, in the middle of the bay, to 6 and 5 fathoms near the shore, sandy ground, with some patches of sea-weed. The most frequented anchorage is in 7 fathoms, under the south shore, opposite to some fishers' huts. The little island Escombrera, at the entrance, is hilly, and has a watch-tower on its summit. Its position is lat. $37^{\circ} 33' 30''$, and long. $1^{\circ} 0' W$.

PORMAN.—From Escombrera, eastward, to Cape del Agua, a league distant, the coast is high. The cape is steep, and its summit is formed into three little peaks: at 4 miles from it, E. $\frac{1}{2}$ N., is the little port of PORMAN, having, in the middle, a depth of 7 and 8 fathoms, bottom of sand, over which vessels of all descriptions may, during the summer, lie in safety. The best anchorage is rather nearer to the western than to the eastern shore; the harbour being open to southerly winds only. That from the S.W. brings in the heaviest sea. The country around the bay is uninhabited, but on the summit of the east point is a tower, with three guns; and near the same point is a rock, even with the surface of the water, at about a cable's length from it to the westward. Fresh water may be procured in the north part of the bay, near the middle, at a spring about one-third of a mile from the beach.

Eastward from Porman, the coast continues high to CAPE NEGRETE, more than a mile distant. From the cape, which is elevated and black, the land falls irregularly towards Cape Palos, but between are the two pointed mountains *Los Juncos*.

CAPE PALOS.—This cape, which lies in latitude $37^{\circ} 37'$, and longitude $0^{\circ} 42\frac{1}{2}' W$. is not elevated, but has a square watch-tower on it, with three guns, with a small house near it. Westward of the cape the shore is foul and rocky, to the distance of $3\frac{1}{2}$ miles; but on the north side is an extensive plain, with a small roadstead, protected from south winds by the cape, but open to the East and N.E. The greater
Hormiga,

Hormiga, a flat islet, lies E. by N. more than 2 miles from the tower on the cape, and a little from it to the south-westward, is the *Lesser Hormiga*, a bare rock. In the interval between are several rocks; but any ship may pass through the channel between Little *Hormiga* and the cape, in from 8 to 5 fathoms. But the wind should be fair, and they should keep rather over to the cape, because a shoal lies at the distance of about half a mile W.S.W. from the *Hormiga*. There is, also, at the same distance, E.N.E. $\frac{1}{2}$ E. from the Great *Hormiga*, a similar shoal: this lies with the *Hormigas* in a line, and Cape Palos tower on the south side of the hill called the Greater Junco. It may be known by its white colour.

The narrow slip of land, which extends about two leagues to the north, above Cape Palos, is called LA MANGA. It forms the MAR MENOR, or LITTLE SEA, which contains several elevated islands. Those in want of fresh water may obtain it, in all seasons, by sinking *cascimbos*, or pits, in the ground, on La Manga.

The ISLA GROSA, which lies $6\frac{3}{4}$ miles to the northward of Cape Palos, is high, and about 640 yards in length. Its appearance is somewhat like a haystack, and its distance from La Manga, or the shore, is a mile and a quarter; between is a roadstead, protected from easterly or Levant winds. Vessels anchor at the distance of half a cable from the isle, in $4\frac{1}{2}$ fathoms, sea-weed; but the place is adapted to xebecs and small vessels only. At E. by N. 320 fathoms from the isle, is a small *farallon*, between which and the isle is a depth of $7\frac{1}{2}$ fathoms; but, at 575 fathoms, E.N.E. from the island, is a rock, having over it only one fathom of water.

At a mile and a quarter N.N.W. from the Isla Grossa is the Tower del Estacio, on a low rocky point, projecting from the Manga, and which forms a small bight, having from $2\frac{1}{2}$ to 3 fathoms. From the point, a reef of rocks extends to the south-eastward, to the distance of $3\frac{1}{2}$ cables.

At about $2\frac{1}{2}$ miles to the northward, from the Tower of Estacio, is the mouth of the *Mar Menor*, already noticed, which is protected by a tower, having two guns. The water is very shallow, so that none but fishing-boats can enter. From the tower, *de la Encamizada*, to the next, on the north, *Herradura*, the distance is $4\frac{1}{2}$ miles, and here the high coast again commences.

CAPE ROCH, with its tower, stand at the distance of $3\frac{1}{2}$ miles N.E. by E. from the tower of *Herradura*. The land, which is rather higher than that of *Herradura*, may be readily known by its reddish colour. The *Torre Vieja* is 5 miles N.E. by E. $\frac{3}{4}$ E. from Cape S. Roch, and the greater part of the coast between forms a sandy bay, resorted to by vessels for salt, which is manufactured here; but the water is so shallow, that they lie at the distance of half a mile from shore, where the depth is $3\frac{1}{2}$ fathoms, bottom covered with sea-weed.

CAPE SERVERA.—From Punta de Piedras, or the point of the *Torre Vieja*, to Cape Servera, one mile in distance, the coast is of moderate height. The latter has a round tower on it, with two guns. Above Cape Servera the coast is again low and open: at a mile and a quarter northward from it is the strong tower and houses of MATA; there are salt-works on the beach, and vessels come here for salt, but the road is confined as well as exposed, being entirely open to easterly winds.

At $5\frac{1}{2}$ miles to the northward from Cape Servera, is the little town GUARDA-MAR, which is situated on the beach, at the foot of a small hill, surmounted by a fortification. Near this, on the north, the River Segura falls into the sea. The ground is shoal, but there is no proper anchorage.*

The CASTLE of STA. POLA, a square structure, situate in a plain on the sea-side, stands at about 7 miles N.E. by E. from Guarda-mar. Close to it, on the west, is the little town *Lugar-nuevo* (New Town); and, at a league to the eastward, is the extremity of the Cape of Santa Pola, distinguished by the Tower of Talayola.

* The description in the text is from *Tofino*; but here it is to be noticed, that *La Mata* was materially injured by the dreadful earthquakes of March, 1829. This awful calamity totally annihilated several villages, and partially ruined many others. Those on the coast which suffered were *Torre-vieja* and *Guarda-mar*, and these were entirely ruined. The River Segura, which flowed through the city of Murcia, changed its course and its mouth; and four craters, at the place where *Torre-vieja* had stood, poured forth torrents of fetid water.

The ROAD of LUGAR-NUEVO, a very useful one, comprehends all the space between the town of Guarda-mar and Cape Santa Pola: the ground is good, all along, in from 9 to 4 fathoms; the bottom of sea-weed in 4 and 5, and sand, outward, to 9 fathoms, which holds well. With the wind from seaward no apprehension need to be entertained; but with a wind off shore the requisite precautions should be taken, that the vessel may not be driven from the slope of the bank into deep water. The usual anchorage is in 4 or $4\frac{1}{2}$ fathoms with the castle of Sta. Pola, N.E. by E., distant about one mile. Vessels should moor N.W. and S.E., with the longest cable in the latter direction: men of war farther off, in 8 or 9 fathoms.

From this road will be seen, to the *W.* by *S. true*, the *Sierra Cayosa*, a ridge of mountains, four leagues up the country, which are of moderate height, appearing dark and detached from other high land.

Cape Santa Pola, when viewed from the southward, appears, at first, like a flat point, even with the water; then gradually sloping up to a moderate height, and again rising more rapidly to the summit. The ground declines evenly, and of a reddish colour, to the neighbourhood of Lugar-nuevo. From the northward the cape presents a similar appearance; but, from the eastward the high land is plainly seen, although the lower parts seem blended with those behind them.

The latitude of the middle point of the cape is $38^{\circ} 12' 5''$: its longitude $0^{\circ} 31' 20''$ W. Its outer part is surrounded with a sand-bank, extending to the distance of a cable's length, with 13 or 14 feet of water on it.

The ISLA PLANA or TABARCA, (pr. *Tavarca*) which is rather more than a mile in length, from east to west, lies at the distance of 2 miles to the S.S.E. of Cape Sta. Pola. On its western part stands the Castle of S. Pablo, (St. Paul) in lat. $38^{\circ} 10'$. The isle is altogether low and flat: at a short distance from the south part are some *Cabezas*, or heads of rocks, above water; and, at the distance of a cable and a half from the outer or eastern point is the islet called *La Piedra de Fuera*, the outer rock, otherwise *La Nave*, the ship. There is a ledge, partly above water, between it and the island, and another extending easterly, entirely covered, to two cables' length: still farther out, in the same direction, at a mile *E. 15^{\circ} S. true*, from the *Piedra de Fuera*, is a rocky shoal of $2\frac{1}{2}$ fathoms.*

From the existence of the shoals above described, and which have, heretofore, been very erroneously represented, it has been recommended to vessels, under favourable circumstances, to pass through the channel between Cape Sta. Pola and the island, rather than to the eastward of the latter; minding only to keep in mid-channel, the shoalest part of which has a depth of more than 6 fathoms, shoaling gradually on each side. The bottom may be seen all the way through. With a large ship, it is, however, improper to attempt this passage, as there is, frequently, an adverse sea, and it is not easy, by the eye alone, to follow the middle of the channel.†

From the TOWER and CAPE of ALGIBE, which stand at the distance of $2\frac{1}{2}$ miles to the northward from Cape Sta. Pola, the coast towards Alicante is low, with a flat open shore. At half a league from Cape Algibe is the tower of Calabazina; and, at a league and a half, that of Aguamarga, which is only 2 miles to the S.W. from the pier of Alicante.

ALICANTE (Ant. LUCENTUM).—The castle of Alicante stands in lat. $38^{\circ} 20' 8''$, and long. $0^{\circ} 29' 4''$ W. The town, which has been rated as the fourth commercial city of Spain, contains about 18,000 inhabitants. It is situated at the foot of a hill, on

* "The passage between the *Isla Plana* and the main should not be attempted by a line of battle ship, unless with a fair wind and smooth water, as there is not more than a quarter-less 5 for some distance, when directly between the *Tower of Escaleta*, on Cape Pola, and the nearest part of *Plana Island*." (Mr. Wilford, *Master of H. M. S. Pylades*.)

Capt. Livingston has passed several times between the island and the main, both in going to and coming from Alicante. He got nearly in mid-channel, in 10 fathoms, and stood S.W. by W. until nearly between the island and Cape Santa Pola, and then W.S.W. nearly for Cape Severa, carrying regular soundings until they shoaled to 5 fathoms, which continued for nearly a quarter of a mile; then deepened to 8 fathoms, still with irregular soundings, until the innermost point of the island and the town of Escaleta were brought two points abaft the beam.

† The tower on Cape de la Huerta in a line with the highest peak of Monte del Hombre, bearing N.N.E., leads clear of the outer shoal on the east.

the summit of which stands the castle, commanding the town and communication with it by a passage between two walls. The pier admits small craft only: large vessels generally anchor without, in about 7 fathoms. The exports are soap, wine, wool, fruit, salt, barilla, kermes, aniseed, antimony, alum, vermilion, &c.

The BAY of ALICANTE, properly speaking, is formed by Cape Sta. Pola and Cape de la Huerta. The former has been already described; the latter bears from it N.E. $\frac{1}{2}$ E. nearly 10 miles, and is distinguished by the tower of *Alcora*: a reef of rocks extends from it, to the eastward, about one-quarter of a mile. At the edge of the sea, Cape de la Huerta is a low flat point; but, at half a cable's length within, the ground rises in a whitish rock, or stone, on which is the tower; the surface above, uneven and broken, extends to a small peak, *Picacho de las Matus*, which is a useful mark for the coast.

The usual anchorage off Alicante is entirely exposed to the winds from E.N.E. to S. by W.: but, as the ground is good, sea-weed and sand, when there is no heavy sea, ships ride tolerably well with all winds, but best with those from the N.W. and N.E., from which they are protected by the mountains. They should moor N.E. and S.W. with the small bower to the S.W., at about a mile from the land, in from 11 to $5\frac{1}{2}$ fathoms: some may advance to 3 or 2 fathoms, to the southward of the castle of Sta. Barbara, which crowns the top of a rising ground.

From CAPE DE LA HUERTA to the Point of BENIDORME, the bearing and distance are, E.N.E. $\frac{1}{2}$ E. [N. 55° E.] $6\frac{1}{2}$ leagues. Of this extent the greatest part is destitute of anchorage. Three towers distinguish the rocky coast; the first, at $4\frac{1}{2}$ miles from the cape, called *La Ileta*; the second, at $7\frac{1}{2}$ miles, *del Agua*; the third, at $10\frac{1}{2}$ miles, *del Charco*. The village named VILLAJYOYA is 14 miles from Cape de la Huerta: here small vessels may lie, on good ground, protected from north-westerly and north-easterly winds.

Three miles to the eastward, from Villajoyosa, is the tower of *Guibou*, on a low point, which falls thence to a sandy shore. Two miles farther is the town of BENIDORME, close to the sea, on a rock of moderate height. At the distance of 2 miles S. by W. $\frac{3}{4}$ W. [S. 20° E.] from Benidorme, is an islet of the same name, which is only 455 fathoms over, from N.E. to S.W. It is hilly, uninhabited, and so steep that vessels may pass within less than half a mile of it, in 11 fathoms. The greatest depth, in the mid-channel, between the island and main, is rather more than 20 fathoms. It is, however, to be noticed, that, at about a cable's length from the south side of the island, is a rock, surrounded by a bank of a whitish colour, not far from which is a depth of 14 fathoms.

Vessels of every description may anchor in the BAY of BENIDORME, protected from winds from the East, by the North, to West, but exposed to all others. The eastern point, having on it the tower of *Escaleta*, is rather high, and may be approached with safety. The best anchorage is to the south of the town, in 14 or 15 fathoms, at the distance of two cables, or rather more, from the extremity of the rock on which stands the fortress of Benidorme. Here, should the wind change to the S.W., it will be easy to get under sail, and stand out so as to clear the eastern point. Small vessels generally anchor on the west side, close under the cliff or town, with one cable on shore, and an anchor to the S.W. Fresh water may be readily obtained in several places.

The SOUTH WIND is more prevalent here than in any other road of the coast, and is therefore dangerous to vessels, especially in the autumn and winter, as it sends in a great swell.

From the Point of Benidorme, or Escaleta, $2\frac{1}{2}$ miles to the N.E., the coast is high: within this extent is an islet, close to the land. Upon the north point of this high land is the tower of *La Bombarda*, with one gun.

BAY of ALTEA.—This bay, which lies immediately to the northward of the tower last mentioned, is more than 2 miles in extent, north and south, and vessels of all sizes may lie here sheltered from winds between North, by the West, to S.W., over a bottom of sand and mud. The best place is, with the town, which stands on an eminence, bearing N.N.W. in 12 fathoms, at three-quarters of a mile from shore; because, from this spot, a vessel may clear the south point, should the wind get round to the east. To the distance of a cable and a half from shore, all along the bay, the ground is of rock; farther out, sand and mud. Plenty of good water may be had on the beach.

Two leagues to the west, from the town of Altea, is a high hill, having, on its western summit, a deep gap, which is very visible on the southern side: this is called, by the

the seamen, *La Cuchillada de Roldan* (the Cut or Gash of Roldan). This mountain, from its superior elevation, is the first that is seen hereabout on coming in from sea.

A small river terminates the Bay of Altea, and the coast hence continues low one mile and a quarter to the N.E., where stands a tower, with two guns, on a point called *Cape Negrete*, whence the land becomes higher, and forms a shelter for small vessels; but the ground is foul: there are two islets, the farthest of which from shore lies more than half a mile from the tower to the East [*E.N.E.*].

From Cape Negrete the shore forms a bight of rugged and foul ground, which includes two towers, *La Galera* and *Mascarat*.

The PENNON (or Great Rock) of CALPE, called, in the country, the *Mountain of Ifah*, is the termination of a high rocky ridge, forming the western boundary of the BAY of CALPE, distinguished by a town of that name. The anchorage here is, in some degree, sheltered by the hill from easterly winds, but it can be used only in the summer-season. Vessels occasionally anchor on the east side of the hill; but near the shore, in this road, is a reef of sunken rocks; hence it cannot, in any way, be recommended to a stranger.

MOREYRA.—BETWEEN the PENNON of CALPE and CAPE BLANCO, in an extent of one league, the coast is variegated and uninhabited: the land moderately high. Eastward of Cape Blanco, at the distance of half a league, is the CAPE and TOWER of MOREYRA; the space between is called the BAY of MOREYRA, or ALMOREYRA, in which ships may ride safely during all winds from West, by the North, to East; the best station being with the fort in the middle of the bay, bearing N.E., at the distance of about 3 cables, in 9 fathoms, sand and weeds: the greater part of the coast is stoney and rocky. By making a cable fast on shore to the eastward, with an anchor to the west, a vessel will be defended from the swell, and ready to get under way.

BEYOND CAPE MOREYRA the coast on the N.E. is high and precipitous to *Cape de la Nao*, a distance of more than 5 miles. Close to the latter is a small islet. At the distance of about a mile and a half within the cape, on a short extent of beach, is a small fort, *La Granadilla*, with two guns.

CAPE DE LA NAO is situate in lat. $38^{\circ} 44' 40''$, and long. $0^{\circ} 10' 33''$ East. The coast hence to CAPE ST. MARTIN, $2\frac{1}{2}$ miles, is hilly. On the south side of the latter is an islet of moderate height, close to the land, but foul and rocky, excepting on the eastern side, where the water is deep; as it likewise is about the Cape.

CAPE ST. ANTONIO, in lat. $38^{\circ} 49' 50''$, long. $0^{\circ} 8' 53''$ E. is 2 miles to the northward of Cape St. Martin; it is high, level, and perpendicular towards the sea, with a monastery on it, and some wind-mills on its summit. These capes form the BAY of XAVIA, on the rising land of which, above the beach, is the little town of that name. This roadstead protects vessels from winds at South, S.W., West, and N.W. The anchorage is in the northern part of the bay, under the tower of St. George, for this is the only spot of clear ground. Vessels bound to the northward, with an adverse westerly wind, may come to in 12 fathoms, sand, with the tower bearing N.W. [*W.N.W.*] nearly a mile off. Here the tower and chapel on Cape St. Antonio will bear North [*N.N.W.*].

A REMARKABLE CHANGE of WIND is frequently found to take place near Cape St. Antonio; and vessels coming from the westward, with a wind in the same quarter, find, when they reach the Cape, another from the North or N.E., and blowing fresh. Under these circumstances, those who are not disposed to stand out to sea come to anchor in the Bay of Xavia, awaiting the land-breeze of the morning, when they double the Cape to the northward.

CAPE ST. ANTONIO, WESTWARD, TO GIBRALTAR.—Westerly winds on the coast of Spain, between this part of the coast and Gibraltar, frequently vary 4, 5, or 6, points, in the course of 24 hours; and that regularly during the summer, and often in the winter. It is important that this should be known, in particular to all those who are bound to the westward. The wind, if blowing nearly in the direction of the shore, will veer a point or two more towards it during the day, and at night as much from off it; and, if the weather be moderate, frequently much more. In order to take the best advantage of these changes, it will be necessary to be close in with the shore at sun-set, or a little before, where short tacks should be made, until the wind draws off the land, with which you may stand off until 7, 8, or 9, o'clock in the morning, according to circumstances;

cumstances; at which time the wind will be veering to seaward, when they should tack and stand in again. This is more particularly necessary when so low down as Cape de Gat, as there the effects of the eastern current will be felt, and most at a distance from the land. To the westward of Malaga, short tacks will keep a vessel entirely out of the current; and, on approaching Gibraltar, she may either anchor at the back of the rock, or work into the bay, according to the directions already given on page 14.

From Cape St. Antonio the coast trends to the north-westward, and continues high for $2\frac{3}{4}$ miles, where it terminates in a low point, *Punta Sardo*. Between is the tower of *Aqua-dulce*.

BETWEEN PUNTA SARDO and CAPE CULLERA, which is situate in latitude $39^{\circ} 9'$, and longitude $0^{\circ} 11' 17''$ W., the coast is a low beach. At $2\frac{1}{2}$ miles N.W. by N. from Point Sardo, is the little harbour of *DENIA*, which is formed by two shallow banks; over which is the town of that name, having an old castle in the middle of it. The banks extend outward to the distance of a mile. In the channel or harbour, towards the town, are from 9 to $5\frac{1}{2}$ feet only. The land on which the town is situate is of moderate height, and, at a distance, appears like an island; the land on each side of it being low. Vessels may anchor off the town, without the harbour, in 6 or 7 fathoms, on sandy ground.

At three miles to the north-westward of Denia is the tower of *Almadrava*; thence to the little town of *Oliva*, the distance is $6\frac{1}{2}$ miles: the latter stands at the distance of one mile and a quarter from the sea. At about 4 miles farther to the north-west, and one mile and three-quarters from the sea, is the town of *GANDIA*, on the left or northern bank of a small river. The coast hereabout is rocky as well as low, and affords no shelter from easterly winds. On the shore, between Oliva and Gandia, stands the round tower of *Pilas*.

At $2\frac{3}{4}$ miles to the northward of Gandia River is a tower, with one gun, called *Xarac*, or *Sarrac*; nearly 2 miles to the northward of which is another, *La Ball*: and, at about the same distance to the northward of the latter, is the entrance of the *River Zucar* or *Jucar*. The bar of this river admits only small barks, which lade with rice, an article of considerable export here. At the mouth of the river, on the south side, is a tower with several guns; and, on the north bank, at a little more than half a mile from the entrance, stands the town *CULLERA*, at the base of a range of hills which terminate in the cape of that name. A little to the north of the mouth of the river, near the shore, with the town bearing W. by S., is a rock under water.

CAPE CULLERA.—Near this cape, the position of which has been already given, is an islet, which seems to promise shelter for small vessels; but the ground around it is shoal and interspersed with rocks. Above the Cape, to the northward, the land is again a sandy flat; and it thus continues, forming the Bay of Valencia, to the neighbourhood of Cape Oropesa, which is situate in lat. $40^{\circ} 5' 35''$ and long. $0^{\circ} 7' 48''$ East. At $5\frac{1}{2}$ miles to the northward, from Cape Cullera, is the tower named *Casa del Rey*; and, at an equal distance farther to the north is another, the *Torre Nueva*: behind these, on the west, is the *Albufera* or Great Lake of Valencia, which is separated from the sea by a long narrow slip of low sandy land.

VALENCIA.—The *Grao*, or town on the Strand of Valencia, lies at the distance of 18 miles N. $\frac{1}{4}$ E. [$N. 17^{\circ} W.$] from Cape Cullera, in lat. $39^{\circ} 26'$ and long. $0^{\circ} 17' 52''$ West. The sea hereabout is shoal, and it is highly dangerous for a vessel to be caught here during an easterly wind, as it will be next to impossible to get out to sea; and much of the bottom is of rock.

In front of the Grao is a semi-circular mole, the extremities of which are about half a mile asunder. It is entirely open to the S.E. The depths between the mole-heads are from 12 to 10 feet, whence it shoals to the beach. On the N.E. end of the mole is a fixed light, in form of a semi-circle, with its concave side toward the sea; the reflector is circular, composed of mirrors, which reflect the light of nine lamps, producing a brilliant light, about one foot in diameter. The lantern is four feet in height, and placed on the top of a quadrangular wooden pyramid of 22 feet, standing on the extremity of the highest pile of rocks forming the point of the mole. Thus the light is elevated 37 feet above the level of the sea, and may be seen, in clear weather, 12 miles off.

The *CITY* of *VALENCIA* stands at the distance of a league to the westward of the Grao, on the right or southern bank of the River Guadalaviar. This city is surnamed the handsome,

handsome, but very undeservedly, its streets being narrow and crooked, the houses ill-built and dirty. Its population is computed at more than 100,000. From the Grao are exported the productions of which Valencia is the *dépôt*, and nearly the same as the exports from Alicante.

From the Grao of Valencia to that of Murviedro, the bearing and distance are nearly N.E. [*N. 22° 15' E.*] 11 miles: there is no habitation between but the tower of *Pucha*, which is 2 leagues from the River of Valencia. On the Grao, or Strand, of Murviedro, is a tower with two guns, and several warehouses. The road here is unsafe, although not so rocky as that of Valencia.

The town of MURVIEDRO, the antient SAGUNTUM, stands on the southern bank of the River Palancio, at 3 miles from the sea, on elevated ground. It is small, the inhabitants being about 6,000 only. The streets are narrow and dark, but the suburbs well built. The citadel, which still retains the name of *Sagunta*, occupies the entire summit of a high rock.

FROM the GRAO of Murviedro, the coast extends 4 miles N.E. by E. to a low flat point, *Cape Canet*, having a fortified tower: thence to the northward are other towers along the shore, but no place of shelter or proper anchorage.

At 11 miles to the south-eastward of Cape Oropesa, and at 2 miles from the sea, on the south bank of a river, is the town named Castellon de la Plana. It is a useful mark from sea, the buildings being conspicuous at a distance, particularly one which is large and white.

CAPE OROPESA, of which the position has been already given, is high, of a dark colour, and extends irregularly outward to a flat point. On the Cape are two towers.

Two leagues S.W. by W. from the Cape is a shoal of 11 or 12 feet of water; and there is another at about a mile to the southward of the Cape: a near approach should, therefore, be avoided.

The COLUMBRETES, four clusters of islets and rocks, lie 30 miles S.E. [*S. 65° E.*] from Cape Oropesa. The largest and northernmost has, on its N.E. side, a little harbour, which occasionally shelters small vessels: even the Moorish Corsairs have sometimes taken advantage of it, as a place of concealment, in order to carry on their depredations. The whole are comprised within the space of 3 miles, between lat. 39° 51' and lat. 39° 54'. The central group lies to the West and S.W. of the large islet, about one mile; the southern groupe, of still smaller patches, lies nearly half a league more to the south, and between is a channel of 25 to 30 fathoms of water.

The Columbretes were surveyed, in 1823, by Captain *Wm. H. Smyth*, who has observed that *Colibre*, the largest, from its comparative magnitude, may merit the name of island. Its harbour, now called *Port Tosão*, appears as the mouth of an antient crater, although forming a tolerable secure anchorage for vessels, in westerly winds, in from 5 to 10 fathoms. Here privateers, and especially the corsairs of Barbary, have been known to lurk; and, as the summit of the hill commands an extensive horizon, they have pounced upon their prey very unexpectedly. The port is somewhat more than a quarter of a mile across at the entrance; and, as it forms a capacious basin, would hold several vessels, in case of need, in from 5 to 12 fathoms, on an indifferent bottom of mud, weeds, and rocks. It is tolerably secure from all winds but those from N.E., East, and S.E., though, in the latter case, craft might find shelter close within the southern shore.

Monte Colibre, the highest and northernmost land, according to Captain Smyth's observations, lies in lat. 39° 53' 58", long. 0° 44' 27" E. Variation (on shore) 17° 41'.* This hill, with a hummock to the southward, gives the isle a *saddled* appearance. These hills are covered with an exuberance of dwarf olives, geraniums, prickly-pears, myrtles, and brush-wood; but every other part exhibits lavas, obsidian, and scoræ, as obdurate as if the fires to which they owe their origin had been but lately extinguished. A few rabbits were seen, and the margin abounded with crabs and other shell-fish; but what excited the greatest surprise, and indeed is very remarkable, was, that the seamen were actually impeded, in their progress with the instruments, by the number of snakes which infested the whole place. They were generally between two and three feet long, finely

* The general variation at sea is about two degrees greater.—Ed.

striated with dark zigzag lines, on a bright yellow ground, blending whiter at the belly, and of great beauty.

At the south point of Port Toño are two high conical rocks, which appear to have formed part of the antient crater. These, and other volcanic fragments, consist of similar materials, as lava, crystals, scorie, &c.*

VALENCIAN COAST, CONTINUED.—FROM CAPE OROPESA, TO THE NORTH-EASTWARD, the shore is low and level to the distance of 16 miles, but the interior is of moderate height. Three towers, within this distance, protect the shore: 1, the *Torre de la Sal*, at 6 miles; 2, the *Torre Blanca*, at $9\frac{1}{2}$ miles; and 3, the *Torre Cubicor*, at $13\frac{1}{2}$ miles, from the Cape. At a league N.W. by W., true, from the *Torre Blanca*, is a village of that name.

PENISCOLA.—At the termination of the low coast, above described, where the coast becomes hilly, is the *Torre Nueva*. The elevated coast extends 7 miles N.E. by E. $\frac{1}{2}$ E. [$N. 41^{\circ} E.$] to the town of *PENISCOLA*, in lat. $40^{\circ} 22' 40''$, and long. $0^{\circ} 28' 8'' E.$, and 3 miles to the S.W. of which is the town of *Abadan*.

PENISCOLA is a small town, defended by a fortress, and covering a large rock, on the upper part of which is a large square building, the first object seen from a distance. The rock on which the town is situated is connected to the main by a tongue of low ground, so that it appears like an island. The road is little frequented, it being much exposed to the most dangerous winds; those from N.E. and East to South. In summer it is, however, resorted to, with winds from West and N.W., as the ground is good. The best station is to the E.S.E. [*East*] of the town, at about $3\frac{1}{2}$ cables off, in 6 fathoms, fine sand. Should the wind come round to the east, vessels may, from this spot, weigh and stand off to the southward. But, observe that, should the wind happen to get round to the S.E., the best course is not to stand to the N.E. to clear the shore, but the contrary. Plenty of good water may be procured from a spring on the point without the town, at the west bastion.

From *PENISCOLA*, the coast northward is low and flat to the distance of 11 miles. On the shore, at $3\frac{1}{2}$ miles N.E. [$N. 24^{\circ} E.$], is the little town *Venicarlo*; and, at 6 miles, another, *Vinaros*. The latter may be known by a great church with a high steeple, standing almost in the middle, and having walls and fortifications about it, besides a fort and some warehouses between it and the sea. Here are several wells of good water. At $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. [$N. 30^{\circ} E.$] from the point of *Vinaros* is a watch-tower, *Sol del Rio*, at the mouth of the little river *Senia*, the boundary of the two provinces Valencia and Catalonia. Here the shore begins to rise; and, at a mile and one-third from the tower, is a small beach, with a few houses, and another tower, *Casas del Cana*. All this part is entirely exposed to easterly winds.

HAVEN of ALFAQUES.—This harbour, which may be considered as commencing at the *Casas del Cana*, affords excellent shelter, and is capable of admitting a large number of vessels, not exceeding frigates, as the depth is generally 3 and $3\frac{1}{2}$ fathoms over the greatest part of it, an extent of 6 miles, nearly in an east and west direction, the bottom every where of mud. Those who intend to lie here for a considerable time proceed up into the bay, but such as take occasional shelter only, may come to at pleasure, as the bottom is, in all places, clean. The port has been formed entirely by alluvium, or the mud and other substances constantly brought down by the River Ebro; so that all the ground on the north and east is marshy, and full of small lakes and ponds: it produces a great quantity of salt, which is prepared in the easterly and northerly parts of the haven, where vessels are constantly taking it in.

From the *Casas del Cana* to the town of *Rapita*, a league and a half to the north-eastward, the shore is of some little height, and rises inward to a range of hills named the *Sierra de Monsia*. *Rapita* is the only inhabited spot in the haven, and stands in lat. $40^{\circ} 36' 30''$, long. $0^{\circ} 37' 48'' E.$ To the south-westward of it, at about one mile and a third, is the tower of *Codonol*, with two guns.

Between the *Sierra de Monsia* and *La Rapita* is a small, round, and pleasant, hill, with a tower on it, called *La Gardiola*. As these do not fall in a line with any part of the *Sierra*, they are very useful in pointing out the entrance to the haven. They bear

* For the Chart and original description, see the Journal of the Royal Geog. Soc. 1830, 31, p. 58.

N.E. $\frac{1}{2}$ N. [N. $18\frac{1}{2}^{\circ}$ E.] from the tower of Codonnol, and N. by W. $\frac{1}{2}$ W. [N. $36^{\circ} 55'$ W.] from the point of La Banna, the outer land on the S.E.

At the distance of 2 leagues to the eastward of Rapita, on the N.E. shore of the haven, is the tower of S. Juan, having two guns. The southern side of the haven, like the northern, is sandy and nearly covered with bushes. Neither fresh water nor wood are to be found here.

Having entered the haven, on proceeding eastward, be careful to avoid a point of sand on its southern side, which is $2\frac{1}{2}$ miles E.S.E. [East] from Rapita, and which may be avoided by steering towards the tower of S. Juan, whence you come to an anchor as most convenient. Vessels should moor with two anchors, N.W. and S.E.

A large ship, requiring only shelter from an easterly wind, should come to with the tower of Codonnol North [N.N.W.], in $5\frac{1}{2}$ or 6 fathoms, which will be in the midway of the entrance, taking care to keep clear of the shoal on the S.E. side.

Vessels from the eastward, in approaching the port, should be extremely cautious on advancing toward the low ground, more especially if night be coming on. With the summit of the Sierra de Monsia bearing N. by W. [N.W. by N.], or North [N.N.W.], they will be within the low shore on the east, and may bring to, in the entrance, in $4\frac{1}{2}$ or 4 fathoms, there to wait for day-light.

The most dangerous winds hereabout are the *Maestrales* or North-westers, which are sometimes very impetuous, and require all attention from vessels at anchor, the ground being soft. The winds which blow into the haven are from the S.S.E. to the S.S.W.; and it has been observed that, during the summer, the S.W. winds, *Embas*, almost constantly prevail here in the day-time, but veer, in the night, to the North and N.E.

From the point of La Banna, or S.E. point of Alfaques, the alluvial or muddy shore continues 11 miles to the north-eastward, to the low point, improperly called *Cape Tortosa*, which is, in fact, the bar of the River Ebro, (*Iberus* of the antients,) as here that river discharges itself into the sea, by two mouths, formed by the low isle called *Buda*, the eastern point of which, POINT or CAPE TORTOSA, is in latitude $40^{\circ} 43' 55''$, and long. $0^{\circ} 55'$ E.

TORTOSA.—The Ebro is navigable only by vessels adapted to the river. The city of TORTOSA, the *Dertosa* of the antients, stands on its north bank, at the distance of 20 miles from the sea, and contains about 18,000 inhabitants: it has a handsome cathedral and an old castle. At 2 leagues below the town is the village *Amposta*, having a modern canal, which communicates with Rapita and the Port of Alfaques.

FROM CAPE TORTOSA the coast trends on the N.W., more than 2 leagues, to a small bay, EL FANGAL, formed, as that of Alfaques, by the depositions of the Ebro. The depths are from 5 to 2 fathoms; but it is no harbour, as N.W. winds frequently rage here, especially in the autumn and winter, and the ground is loose and shifting.

All the low land between the Bay or Puerto del Fangal and the haven already described is denominated the Alfaques, and should not, in passing, unless the weather be very favourable, be approached nearer than to the distance of 2 leagues, and with the lead constantly in the hand. The general soundings around are, however, regular, mud and sand, with the depths of $5\frac{1}{2}$ to $3\frac{1}{2}$ fathoms.

The north side of Fangal Bay is of middling height, and is distinguished by a tower of two guns, called the tower of Cape Roig. The shore hence extends to the N.E., rather winding and level. At $2\frac{1}{2}$ miles from Cape Roig is the *Torre del Aguilá*; and, at 2 miles from this, is that of *la Merla*; each has two guns. At 7 miles from Cape Roig is the fort de S. Jorge. The coast hence to the N.E. continues of a good height in the interior, but is lower along-shore, with a few spots of open beach, but no anchorage.

At $7\frac{1}{2}$ miles N.E. by E. [N. 32° E.] from Fort S. Jorge, the coast rises, and presents, on its easterly height, the Fort del Coll de Valaguer, which stands in latitude $40^{\circ} 59' 30''$, and long. $0^{\circ} 58' 40''$ E. The coast hence again becomes low, and from it a small river, *Hospitalet*, falls into the sea. Here are several inns and other houses, with the tower of *Pennales*, on a point which terminates the low ground. From that tower, $2\frac{1}{2}$ miles to the N.E. is another, *Milamar*.

CAPE SALOU, which projects more than a mile into the sea, forms a convenient place of shelter during a Levant or east wind. Its position is, lat $41^{\circ} 4' 30''$, long. $1^{\circ} 10' 15''$ E.

1° 10' 15" E. This cape and Point Milamar form a bay, extending in an east and west direction, about $5\frac{1}{2}$ miles, near the middle of which, on the north shore, is the town of *Cambriles*, to the eastward of which is the road under Cape Salou.*

In the anchorage here a great number of vessels may ride in safety, under the lee of the cape: hence an extensive trade is here carried on with the neighbouring country, for its various productions. It is, however, safe in the summer only; for, from the beginning of autumn, destructive storms may be expected from the South, to which the bay is quite open, as well as to the S.E.

The ground is, in general, of sand, with patches of sea-weed, but free from rocks. The anchors hold so well, that it is necessary to weigh them frequently. There are warehouses on the shore, but no regular town. The roadstead is protected by a strong tower, *Torre Vieja*, to the southward of which, in $6\frac{1}{2}$ fathoms, and at about half a mile from shore, is the ordinary anchoring-ground. Water may be obtained from a spring in a field near the tower. There is another tower and battery on the east.

Should a vessel resort to this place in the autumn or winter, during an easterly wind, she ought, so soon as this wind ceases, to draw farther out, lest it should draw round to the southward, and prevent her weathering the cape.

TARRAGONA.—Eastward of Cape Salou, the coast forms a bight, with a sandy beach, to the distance of 7 miles; at the extremity of which stands the fortified city of TARRAGONA, (the *Tarraco* of the antients,) in latitude $41^{\circ} 8' 50''$, and remarkable for its extent along an eminence, fronting the sea. The mole, a modern structure, extends in a south-westerly direction, about three-quarters of a mile into the sea, and has a lantern 30 feet high, at the distance of 40 fathoms, within the mole-head. This harbour is, therefore, capable of containing 100 sail of merchant-shipping, moored in tiers, with their heads to the S.W. by W., a bower-anchor to the westward, ropes on shore from the larboard-bow and quarter, and an anchor from the starboard quarter to the North [*N.N.W.*], but they lie exposed to winds from the S.W. and West; but these and easterly winds seldom blow home, although those from the N.W. and N.E. are frequently impetuous.

The mole and lighthouse of this place were nearly ruined by a gale, in or about 1822, and we have not been informed that any light has since been exhibited here.

To some distance within the mole, there are 5 fathoms of water, which thence shoalens gradually. Spanish frigates commonly lie in the mole, but line-of-battle ships in the road without it, the ground being good, and the depths 15 to 8 fathoms. From the former depth, Cape Salou bears W. by S., the Mole Head N.N.E. $\frac{1}{4}$ E., and Cape Gros E. $\frac{1}{2}$ S., the ground soft brown mud.

CAPE GROS is $6\frac{1}{2}$ miles E. by S. [*N. 79^{\circ} E.*] from Tarragona. It is higher than the coast to the west, with foul ground around it. Within a mile of the Cape, on the west, are the villages of *Torre Denberra*, *Altafulla*, and *Tamaris*: the latter has a great church. On the east the coast is again low, with an open beach: but the interior country presents a range of mountains, extending 16 miles to the eastward, and terminating with the point and chapel of S. Christoval or St. Christopher. Between these points there is no shelter from south-easterly or south-westerly winds, which is the more to be regretted, because the country is here well cultivated, and variegated with many towns and villages.

FROM PUNTA S. CHRISTOVAL, and the coast eastward, within an extent of 7 miles, the coast rises up into high mountains, with lofty precipices towards the sea. This tract is denominated the COAST OF GARAF, and is variegated with coves, the chief of which is that of *Sitges*, $2\frac{1}{2}$ miles from S. Christoval Point, occasionally resorted to by the coasters, for shelter from westerly winds.

Beyond the mountains of Garaf are seen, rising to a great height, those of N. S. de Monserrate;† the extent of these, from west to east, is considerable; the surface of them is rugged and uneven, exhibiting many lofty peaks, which serve as excellent land-

* CAPE SALOU, when seen at a distance, appears like a low black island, having some spots of white sand.

† Nuestra Señora de Monserrate, or Our Lady of Monserrate.

marks. Of the latter, the most lofty bears *N. 8° E. true* from Villa-Nova, *N. 1° W.* from the town of Sitges, and *N.W.* from Monjui, near Barcelona, hereafter noticed.*

On the coast between Cape Gros and Point S. Christoval is a shoal off the village of Cubellas, westward of Villa-Nova, which reaches thence eastward to Point S. Christoval, on which stand the ruins of a church.

At about 5 miles eastward from the Point of S. Christoval is the Point of Terrosa, which is very high, and the most projecting of all this coast. Near the extremity of the high coast is a watch-tower, *Torre Garaf*.

We have now again arrived at a low sandy shore, which extends about 10 miles towards Barcelona. Upon this shore stands, at $2\frac{1}{2}$ miles eastward from the tower of Garaf, the castle *de Fells*; and, at $2\frac{1}{2}$ leagues farther, is the *Torre del Rio*, standing at the mouth of the River Llobregat, on the eastern side. Between the Castle de Fells and Llobregat, may be seen, on the shore, several lagoons or pools of stagnant water. Beyond the Torre Rio, the shore extends $3\frac{1}{2}$ miles to the harbour of Barcelona.

BARCELONA.—The entrance of this port is distinguished on the west by MONJUI, a mountain well known, and which may be seen at the distance of 12 leagues. It is a high hill, by the shore, detached from every other, with a fortress on its summit, which renders it the more remarkable. The hill bears *W.S.W. $\frac{1}{2}$ W. [S. 50° 43' W.]* from the lighthouse on the mole of Barcelona, and *N.E. by N. [N. 11° 10' E.]* from the mouth of the River Llobregat.

The Mole of Barcelona lies in latitude $41^{\circ} 23' 8''$, and longitude $2^{\circ} 10' 25''$ E. Within the mole, which extends full 400 fathoms to the southward, from the eastern side, a considerable number of vessels may lie, protected from S.E. winds. Here it is to be noticed that, the depositions from the neighbouring rivers, which accumulate in the winter, have formed a shoal or bar of considerable breadth across the entrance of the harbour. This shoal extends from the Lighthouse Point, or extremity of the mole, to the foot of Monjui, and has no greater depth than 14 feet of water; but within it are from 22 to 27 feet. As large vessels cannot pass the bar, they anchor without, and are thus exposed to winds, which, in autumn and winter, do great damage to the shipping, even within the mole.

An official notice, dated 14th December, 1823, stated that, on the new mole of this port, then building out to the *S. 6° W. true*, at 212 Castilian toises from its commencement, and 50 toises within its extreme point, a lighthouse had been erected, to serve especially as a guide to those passing the point of the River Llobregat, which bears from the lighthouse *S.W. by W. [S. 25° W.]*; the signal-tower of Monjuich or Monjui *W.N.W. $\frac{1}{2}$ W. [S. 87° W.]*; the old lighthouse North *[N. 20° W.]*; and the point of the River Besos nearly *N.E. by E. [N. 35° E.]*—(*Gerard Murphy, Captain of the Port.*)

A squadron of large ships may anchor, without the bar, in from $16\frac{1}{2}$ to 23 fathoms, muddy sand, by bringing the lighthouse in one with the tower of a church called *La Merced*, and the coast of Garaf open with the south side of Monjui; but it will be necessary to weigh the anchor frequently. This is a convenient situation for weathering the mouth of the River Llobregat, should the wind get round to the East. With a southerly wind, if not very strong, a ship may stand away to the eastward, and if she make a course good to East *[E.N.E.]*, may run along at 4 miles from shore, which is free from danger. The current on the coast generally sets to the south-westward.

On the extremity of the mole is a battery, as well as lighthouse; there are, likewise, another battery and two redoubts on the mole. In sailing in, you must keep about half a cable's length from the mole-head, in order to avoid some loose rocks which the sea has washed from it. The bar has been long increasing, notwithstanding that there are pontoons constantly employed in removing it; and it will not admit a vessel drawing more than 12 feet. It is best to run in mid-channel, and anchor against the *second battery*, observing to range along the mole with the stern to the town, and head to the sea. Close to the mole the water is shallow; and, at the farther end of it, near the town,

* MONSERRATE is as celebrated as singular. A monastery and chapel stand on it, and on the peaks are numerous hermitages, inhabited by monks, who entertain strangers for three days, gratis. From the summit is a most extensive view of the country and sea, including the islands of Majorca and Minorca, at a distance of 45 leagues.

the depth is only 6 or 7 feet, but, in other parts, are $3\frac{1}{2}$ and 4 fathoms. Fresh water may be had at a well without the city. With a wind at S.S.E., a heavy sea sets into the harbour.

BARCELONA is said to have been founded by the Carthaginians, who gave it the name of their General, Hannibal *Barcino*. It is the capital of Catalonia, generally rated as the third port of Spain, but is certainly the second in population and commerce, and is one of its handsomest cities. Its inhabitants have been celebrated for their industry and politeness. The chief manufactures are of cotton, leather, wool, and glass, excellent fire-arms and cutlery; hence they are included in the exports, with wine, brandy, cork, fruits, &c. The chief imports are corn, fish, and woollen goods. During peace it is computed that 1000 vessels enter the port annually, of which one half are Spanish. The city, which is fortified, stands in a plain, open to the S.E., but protected by hills on the north and west, being a healthy and delightful residence; but an easterly wind commonly brings fog, and, says a traveller, "produces such irritability, that the best friends, at those periods, rather wish to avoid each other." The country around is thickly set with villages, and abounds with wood, corn, wine, oil, fruits, honey, cattle, fowl, &c.

The population of Barcelona was formerly computed at 150,000; but a terrible pestilence prevailed here in the summer of 1821, which, with other causes, reduced the number very considerably, and it is now estimated at less than 100,000. For a long time this city was famous for silk manufactures, but these have declined, and a true Barcelona silk handkerchief is no longer to be found. The gun-barrels are still in high repute; but the guns are clumsily made.

The suburb stands between the walls of the city and the sea-shore. All the streets of it intersect each other at right angles, and every house in it is only two stories high, but a church overtops the houses. The Quarantine regulations are very strict, and rigidly enforced.

BADALONA.—FROM BARCELONA to the north-eastward, $7\frac{1}{2}$ miles, the coast is low; but there it is interrupted by a point, surmounted by the small fort named *Mongat*. At about a mile and a half short of it, on the shore, stands the little town *Badalona*; and, at the same distance short of Badalona, is the mouth of the *River Besos*, from which a shallow bank extends to the distance of two cables' length.

Off MASNOU and PREMIA, at about $3\frac{1}{2}$ leagues to the north-eastward of Barcelona lighthouse, there is a shoal, the east end of which, having 4 fathoms, lies with the church of *Villasa* bearing N.E. by E. $\frac{1}{2}$ E., and on with the centre of the town of MATARO. When within the shoal the mark is, the church of Villasa E.N.E. $\frac{1}{2}$ E. In the channel are 6 fathoms of water. The mark for running inshore to the eastward of the bank is, a large house in the town of *Premia* N. by W. $\frac{1}{2}$ W. and on with a tree on the hill under which is the town of *Premia*. At a little to the right of the tree stands a small house. To avoid the shoal, either in running to the eastward or westward, keep the whole of the town of *Mataro* open to the S.E. of Villasa.—(Mr. M'Lellan, Master of H. M. S. *Termagant*.)

MATARO.—The town of MATARO stands on the shore at the distance of $8\frac{1}{2}$ miles E. $\frac{1}{2}$ N. [N. 63° E.] from *Mongat*. Those approaching this place should know, that, although the shore be low and open, there is here a circular chain of rocks, within which is a channel admitting small vessels; and here they are occasionally sheltered from the heavy sea, which rolls along the coast from the offing to the north-eastward. Vessels, which may occasionally come to an anchor off this place, should take a berth at a mile to the southward of the town, where they may lie safely. Mataro may be known by three steeples, which are all in the town, and a large convent without it, to the westward. To the eastward is a small rivulet.

In the space between *Mongat* and *Mataro* are three little towns on the shore, at nearly equal distances, *Masnou*, *Premia*, and *Ville Sar*.

We now take an extent of 11 miles from *Mataro* to the town of *Calilla*. In the interval are, on the low shore, the villages of *Caldetos*, *Arens del Mar*, and *Canets*, but there is no shelter for shipping. So the S.S.W. [South] of the latter, *Arens del Mar*, at the distance of about a mile, is a reef of rocks, having over it a depth of $5\frac{1}{2}$ fathoms.

From *Calilla*, the low shore extends 5 miles, E.N.E. $\frac{1}{2}$ E. [N. 63° E.] to the PUNTA DE LA TOLDEIRA, in lat. $41^{\circ} 39' 10''$, and long. $2^{\circ} 45' 35''$ E. Westward of this are the villages *Pineda* and *Malgrat*. Westward of *Pineda*, at 4 miles from *Point Toldera*, is the

the chapel of S. Susanna; and S.S.E. [S.E.] from this about a mile, is a rock, having very little water over it: this rock lies with the chapel in one with a large house, remarkable as being the only one of that description, and Cape Tosa in a line with the town of the same name.

Point Toldera is flat and low, it having been apparently formed by the depositions of a river of the same name, which falls into the sea to the northward of it. The coast thence trends to the N.E. [N. 25° E.] about 2 miles, where we find the bay and town of *Blanes*, on the east point of which stands a large convent. Close to this point, on the south side, is a dangerous rock under water.

During westerly winds, in the summer, vessels of any size may take shelter in the Road of *Blanes*; but, in winter, south-easterly winds are very violent, and directly on-shore. Ships may come to any where, from the Point of *Toldera*, as the ground is clean: but the most convenient station, with reference to the town, is in 7½ or 8 fathoms, sand, at about three cables' length to the south-eastward of it; as from this spot, should the wind get round to the East, they may get under way, and weather the point. Fresh water may be obtained at *Blanes*, from wells, and a fountain close to the beach.

CAPE TOSA.—FROM THE ROAD OF *BLANES*, eastward, to *CAPE TOSA*, the coast is high and steep. The distance between is 5 miles, and the bearing, E. ½ N. [N. 61° E.]. At 2½ miles is the town of *LLORET*, having a large church, on a little bay or cove, the eastern side of which is a hill, with an old castle on it. *Cape Tosa* stands in latitude 41° 42' 50", and longitude 1° 53' 50" E. On its eastern side is the little town of the same name, part of which stands on the cape, and the rest on a cove, which is 410 fathoms in breadth, and which affords occasional shelter during westerly winds. The best anchorage is in 9 fathoms. Before the east point is an islet, at about a musket-shot from the main.

All along this coast, in the night-time, the fishermen keep fires in their boats, in order to catch anchovies and sardinas; the fires of charcoal-makers may also be seen upon the mountains.

FROM *TOSA*, northward, the coast continues high, with many steep precipices. The cove of S. *FELICE DE GUIXOLS* is 2 leagues from *Tosa*, is 682 fathoms in breadth, and has its town on the north side, upon a fertile plain. There are some rocks about the shore of this place, but the bottom, in general, is of sand, with sea-weed, so that vessels may anchor in safety, over a depth of 8 fathoms. This harbour is to be attempted in the summer only. Water and all other necessities may be obtained at S. *Felice*, as it is one of the best supplied towns in Catalonia. Without the bay, to the eastward, are several rocky islets, the *Balellas*, not far from the land, but having a clear passage between.*

PALAMOS.—THE ROAD OF *PALAMOS* is 3½ leagues to the north-eastward from *Cape Tosa*. It is formed, on the east, by the *Punta Grossa*, a point of moderate height, which lies in latitude 41° 51' 10", and longitude, 3° 4' 23" E. On the beach, in the bottom of the cove, is the town of *PALAMOS*, which has a small mole, extending to the westward, and forming a small harbour. This is the only place of shelter, during winds from E.S.E. to South, hence to the Bay of *Rosas*, and that only for a few small vessels, and in favourable weather. West and S.W. winds bring a heavy sea within the mole, and a N.W. wind is more destructive; for it is, at times, so violent, as to drive vessels from their anchors, &c. This spot cannot, therefore, be recommended to a stranger. On the eastern side of the entrance, nearly half a mile from shore, is a rocky shoal, the greatest depth over which is 10 feet: it is steep-to, there being near it 10 and 11 fathoms. Within this shoal is a rock, a little under water, at about a cable's length from the point.

The marks for running into the Bay of Palamos, to the northward of the rock are, the mole-head in one with the southernmost church in *Palamos* bearing E.N.E. The church is then in one with a valley behind, keeping the windmill open over the land on which it stands. You may know when you are to the eastward of the rock by having a large

* Another description says, "The west point of the bay is very high, and at the extremity of it is a great rock, so near that you can scarcely perceive a separation; the eastern point is also very high, and has two pillars on it, by which it may be known; there are also some rocks lying near it, above water. Between these points is the bay, and in its bottom the town, situated on a fine plain, with a large convent to the westward of it, at the foot of the mountain. Great care is necessary that you be not surprised with the wind at S.S.E. which blows right in."

brownish house, upon a rising ground close to the beach, on with the valley to the westward of the hill under which the house stands, and bearing N.N.W. *The marks for running out*, between the rock and Windmill Point are, the house and valley N.N.W. keeping this bearing on until Point Grossa comes open of Windmill Point, about a ship's length: then you are to the southward, and may steer either to the southward or westward.

From the rock, Windmill Point (*Punta del Molino*) bears E. by N. $\frac{1}{2}$ N.; the church of Palamos N.E. $\frac{1}{2}$ N.; and, a large house on the north side of the Bay in *one* with the high part of the hill under which the house stands, bearing North. The length of the rock, from N. to S., is 44 fathoms, and its breadth, from E. to W., 28 fathoms. It has 12 feet of water on its shoalest part, and is half a mile distant from the Molino, or Windmill, Point.

ST. SEBASTIAN.—FROM PUNTA GROSSA, OR PALAMOS POINT, the coast to the N.E. continues high. At the distance of 4 miles is the Cape and Chapel of S. SEBASTIAN. A cluster of islets, called the *Hormigas*, lie off the coast, nearly midway between: they are level, with a gentle slope, and the sea frequently covers them; but between them and the shore is a passage, sufficiently deep for a large ship, if keeping over towards the land.

Three mile and a half N.E. from Cape S. Sebastian, is CAPE BEGU, the land about which is very high. This cape is in lat. $41^{\circ} 56' 38''$; on its north side is a cove, *Agua-Fria* or *Begu*, having a depth of 13 to 9 fathoms, sand, and which affords shelter from West and South winds: but, at the entrance, is a rock under water. There are a tower and some houses here. Beyond the north point of the cove are some rocks above water, close to the land, the *Losas de la Cala*. The coast now declines, and extends North [$N. 20^{\circ} W.$] above 2 miles, where the high land, extending from Palamos, terminates, and the low shore of *Pala*, having a tower, commences. At the northern extremity of the low beach, 3 miles from the *Torre de Pala*, is the mouth of the *Rio Ter*, a considerable stream, upon the northern bank of which, at a league from sea, is the little town *Torruella de Mongris*, which stands at the base of a high hill, having on its summit the ruins of an antient castle.

The coast to the northward of the *Rio Ter* is high, and to the south-eastward of it are two islets, directly opposite to the river, *Las Medas del Estardis*, which are also high, and extend in a true N.W. and S.E. direction. The largest, on the N.W., is half a mile long, and has a fort for the protection of vessels, which may anchor on the S.W. The other is a lofty rock, shaped like a pyramid. The N.W. point of the largest islet is rather more than half a mile from the nearest point of the shore. The channel between is deep.

The elevated coast extends from the *Rio Ter* to the entrance of the Gulf or Bay of Rosas, a distance of 2 leagues. Within this distance, at 4 miles, is the *Torre Mongot*, and nearly 2 miles farther, N.W. $\frac{1}{2}$ W., is the little town *La Escala*. At a little distance beyond *La Escala*, on the shore, are the ruins of a fortress, with some houses, the only remains of the antient city of *Emporice*, by the moderns called *Ampurias*.

GULF or BAY of ROSAS.—The outer points of this bay are Point Mongat, on the south, and Cape Norfeo on the north. Both are high; but, from *La Escala*, already noticed, the coast declines into a low flat beach, forming a curve of 4 leagues northward. At 2 miles from *Ampurias*, on the south, the beach is divided by the *Rio Fluvia*, which there falls into the sea. At a mile from the sea, on the north bank of this river, is the town of *S. Pedro Pescador*. The mouth of a lake, which discharges itself into the sea, is 2 leagues to the northward of the *Fluvia*, and upon the N.W. side of this lake is the town of *Castellor de Ampurias*. To the north-east, a league farther, are the town and fortress of ROSAS, standing on the beach, with a suburb to the eastward.

The north side of the Bay, off Rosas, is a fine and extensive roadstead, the land on the east being high, and the ground a loose mud, free from rocks, with sand close to the shore, and some patches of large sea-weeds. Small vessels commonly anchor to the S.W. of the eastern angle, in about 3 fathoms, abreast of the Arrabal or Suburb, at a cable and a half from shore; but, to be perfectly safe during a S.E. wind, run under the eastern shore of the bay, in 7 or 8 fathoms, until the castle of *La Trinidad** bears S.S.E.

* The Castle of La Trinidad stands on the high land, at a little more than half a mile South [S.S.E.] from the beach of Rosas.

[S.E.], when you will be half a mile from the middle of the suburb, and $2\frac{1}{2}$ cables from the high land. If more agreeable, you may even run closer in to the shore, or to $6\frac{1}{2}$ fathoms, as all the ground is clear.

The most destructive wind here is that from the north, *Tramontana*, which comes down from beyond the Pyrenees, and rages with great violence: but, as this wind proceeds from the bay, it can never occasion serious danger.

We now proceed around the peninsula, of which the chief projecting points are CAPE NORFEO and CAPE DE CREUX, and the principal harbour PUERTO DE CADAQUÉS. Of this peninsula the coast is, in general, high, but rugged and broken, in small coves, &c. Cape Norfeo has an islet on its south side, but it is steep-to, and the bottom clean. On the eastern side of the cape is a small creek, *Cala de Joncals*, sometimes resorted to by coasters during the continuance of a north-easterly wind. The S.E. point of the haven of Cadaqués is $2\frac{1}{2}$ miles N.E. by E. $\frac{1}{2}$ E. [N. 40° E.] from Cape Norfeo.

CADAQUES.—The PORT or HAVEN of CADAQUÉS extends upwards of a mile N.N.W. and S.S.E.; in the bottom is the town, partly on a rising ground and partly on a spot of beach. It is occasionally used by ships of war as well as merchant-vessels. The S.W. shore is steep, but the N.E. low broken ground; and, in the south-easternmost part of the entrance is a three-cornered islet, *Cucuruca*, on the outside of which the water is deep: There is another islet, *Arenilla*, close under the north shore, and several rocks within; but all over the haven is a good depth of water, on a bottom of strong clayish mud and sea-weed, particularly on the S.W. shore. The haven lies in lat. $42^{\circ} 17' 15''$, and is frequented by vessels bound to the eastward: for often, on making Cape Creux, which is about a league hence to the north-eastward, with a wind at West, they find it change to the East, and therefore prefer taking the harbour to tacking off and on, during the night.

Excellent water may be had from a fountain in the town, near the beach.

WINDS.—The PREVAILING WINDS here, during the greatest part of the year, are from the North and N.E., which blow fresh, particularly in autumn and winter. In these seasons there is also, at times, a gale from the South. A S.E. wind, which, from its direction, might do much mischief, is never known to be violent or to continue long.

On the north side, and close to the harbour of Cadaqués, is the creek called *Port Lligat*, extending 320 fathoms to the westward, and in which merchant-vessels, at times, take shelter; but north-easterly winds blow on-shore. To enter, keep the western shore on board, as rocks extend from the western point, on which the sea sometimes breaks.

CAPE de CREUX lies above $2\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. [N. 30° E.] from Port Cadaqués. It is not very high, but uneven, and has the ruins of a watch-tower upon it. Its position is, lat. $42^{\circ} 19' 35''$, and long. $3^{\circ} 15' 48''$ E. It is the easternmost point of Spain, and may be seen when 25 or 30 miles off. At a mile and three-quarters S.W. by S. from the pitch of the cape is the little *Isla Masina*, and very near to the cape is another islet, *Masa de Oro*, which is small, uneven, and of middling height; between is a good passage. On the south side of the cape is *Infierno*, or *Hell*, a great cavern. *The current here sets, in general, with some velocity, to the S.W.*

From Cape Creux the coast continues high to the port of *Sta. Cruz de la Selva*, a distance of 5 miles to the N.W. [W.N.W.]; but vessels may anchor along shore, in from 20 to 15 fathoms, coarse sand, with a wind from the S.W. The port or haven is open to the north, and extends inward about a mile, by half that breadth. Its depth, however, is sufficient to admit any ship. On the east point is a little hill, having on its summit a battery of three guns. The village is on the south side, and off it is anchorage for small vessels in $3\frac{1}{2}$ fathoms. The entrance of the port may be ascertained by the castle and convent of S. Pedro de Roda, which are on the top of a mountain 3 miles to the W.S.W. [S.W.] from the west point of the harbour, and nearly W.N.W. [N. $87^{\circ} 7' W.$] from the tower of Cape Creux.

The coast, with the exception of the cove of Llanza, continues mountainous to CAPE SERVERA, which is a high promontory, and the last land on the coast of Spain. Its bearing and distance from Cape de Creux is N. by W. $\frac{1}{2}$ W. [N. $37^{\circ} W.$] 9 miles.

III. THE BALEARIC ISLANDS; *comprehending* IVIZA and FORMENTERA, MAJORCA, and MINORCA.

IVIZA, (pronounced *Yoesa*) the *EBUSUS* and *EBYSSUS* of the antients, is an island composed principally of high land, with beautiful hills and delightful valleys: it is fertile in corn, grapes, figs, and other fruit, and there are many wild olive-trees on the island. The inhabitants are employed chiefly in the manufacture of salt, which is highly esteemed. They are robust and hardy, and those who devote themselves to a sea-faring life are esteemed as the bravest and best seamen of the Spanish marine. Its principal harbours are *IVIZA*, the capital, on the S.E., and *PUERTO MAGNO*, or *PORT S. ANTONIO*, on the N.W. We shall commence our description with the little isle *Bedra*, on the S.W., and proceed thence eastward.

BEDRA lies off Cape Jueu, and is, in length, about three-quarters of a mile from east to west. Its eastern extremity is so lofty as to be readily discernible at the distance of 10 or 12 leagues, and even at a greater distance, when not in a line with the land. This isle bears from Cape de la Nao E. by S. [*N. 82° E.*] $5\frac{1}{2}$ miles, and from Cape S. Antonio E.S.E. $\frac{1}{2}$ E. [*N. 89° E.*] $5\frac{1}{2}$ miles.

Between *Bedra* and *Cape Jueu* is *Bedranell*, an islet of moderate elevation. The channels thus formed are deep, and the best is between *Bedranell* and *Cape Jueu*. On the extremity of *Cape Jueu* is a tower. The summit is covered with trees.

At a mile and a quarter S.S.E. $\frac{1}{2}$ E. [*S. 48½° E.*] from *Cape Juen* is *Cape Cala Llentrisca*, which is likewise lofty and wooded half-way down from the summit; the lower part is bare, and of a whitish colour. The coast between is clean, and the water deep, but there is no roadstead. The *CALA LLENTRISCA*, or *Cove*, at a mile to the eastward [*E.N.E.*], can, however, accommodate middling-sized vessels, which may be there sheltered from all winds but S.E.

Above $2\frac{1}{2}$ miles from *Cape Cala Llentrisca*, and bearing E. by S. [*N. 82° E.*] is *Point Roxo* or *Red Point*, so called from its colour. This point is low, and a reef of rocks lies off it, at the distance of two-thirds of a cable's length.* Nearly three-quarters of a mile S.E. $\frac{1}{4}$ S. [*S. 62° E.*] from *Point Roxo*, is *Point Yundal*, low and flat, but descending from a high hill, white on the western side and steep. Off *Point Yundal*, at about a cable and a half, is another reef. From *Point Yundal*, nearly a mile and a half S.E. $\frac{1}{4}$ S. [*S. 62° E.*] is *Cape Falcon*, the upper part of which is high and precipitous, declining thence to a flat projecting point. Two rocky islets lie at a cable's length to the S.W. of the point, and another at about double that distance to the eastward of it. The small bays which are formed by the points above described are too open to the S.W. and South to be of consequence to strangers.

PORTAS POINT, the southernmost point of *Iviza*, which has a tower on it, lies about half a league E.S.E. [*S. 89° E.*] from *Cape Falcon*: it is projecting and flat, but declines from the high land called *Cuervo Marino*, and forms the north side of one of the *FREOS* (friths or narrow passes) between *Iviza* and *Formentera*.

Between *Cape Falcon* and *Portas Point* is the open bay named *CUEVA LARGA*, on the north side of which is a wharf for loading salt, which is brought from salterns, situate to the northward of *Cape Falcon*. At a stone's throw from the wharf are two cisterns of fresh water.

The *FREOS*, above mentioned, are the straits between *Iviza* and *Formentera*, which are formed by an assemblage of islets, lying as represented on the Charts. Of these, two groups, three in each, are on the north of the *FREO GRANDE*, or principal channel, while the *ISLES DEL ESPALMADOR* and *ESPADELL* lie to the southward and S.E. The *MIDDLE FREO* is between the two groups above mentioned; it is about half a mile in breadth, but its greatest depth is little more than $3\frac{1}{2}$ fathoms, and that only in the middle of the strait, from which the water shoalens to either side, on which there are

* It is called *Point Roche* in *Tofino's Chart*, which represents a little port, of this name, immediately to the west of it.

rocks. The **GREAT FREGO**, latitude $38^{\circ} 48' 30''$, is immediately to the north of the *Isla del Espalmador*; it is three-quarters of a mile broad, and has a depth of 7, 8, and 9, fathoms, shoaling, on the south, to $5\frac{1}{2}$, and, on the north, to $3\frac{1}{2}$, fathoms. In passing through, the water will be found so clear, that the stones at the bottom may be plainly seen.

PORT OF IVIZA.—At about N.E. by E. $\frac{1}{4}$ E. [$N. 40^{\circ} E.$] $3\frac{1}{2}$ miles from the tower of *Las Portas*, is the southernmost part of the *Isla Grossa*, which, with a rocky islet, *Botafuego*, close under its west side, and *Plana* on the north, form the eastern side of the harbour or port of Iviza. On the opposite side, at the distance of nearly three-quarters of a mile, stand the town and castle. The latter is about 3 miles N.E. $\frac{1}{2}$ N. [$N. 18^{\circ} 15' E.$] from the tower of *Las Portas*, but between are several islets, the situation of which can be understood only by reference to the Chart of Iviza: two others, the *Great and Little Dado*, lie to the eastward. These are, in general, steep-to. To make the port of Iviza, in a vessel of burthen, from the westward, the proper way is to run through the *Great Frego*, first steering for the tower on the north end of *Espalmador*. With this tower bearing E.S.E. [*East*], the strait will be entirely open, which is then to be passed, as nearly as possible, in mid-channel, only taking care to give a berth to the *Isla Ahorcados*, the eastern islet on the north side, as the depth, at a cable and a half from its shore, is only $3\frac{1}{2}$ fathoms. Having cleared the strait, if the wind be favourable, steer for the castle of Iviza, between the *Dados*, on the east, and the other islets, already noticed, on the west; and, having arrived between these islets, stand for the middle of the mouth of the port, leaving the *isles Grossa and Botafuego* on the starboard side. Having arrived to the depth of 7 or $6\frac{1}{2}$ fathoms, come-to, with the best bower to the S.W., and nearer to the east than to the west side; so that, if the wind should come on strong from the eastward, you may make fast a hawser or cable to the island *Plana*, on that side. In winter, when the North and N.W. winds are most prevalent and violent, the anchor out to the N.E. must be attended to, as it may be apt to come home.

ON MAKING the PORT from the EASTWARD, steer between the south point of the *Isla Grossa* and the greater *Dado*: the passage is three-quarters of a mile broad, and the water deep. When abreast of the south point of *Grossa*, stand on until clear of the next islet, *Botafuego*, when you may bear up for the anchorage, already described.

CAPE MARTINET, a lofty and broken headland, terminating in a point, stands at one mile E. by N. [$N. 59^{\circ} E.$] from the southern point of the *Isla Grossa*; between is *Talamanca Bay*, open to the S.E., but having clear ground, and which has frequently been mistaken for that of Iviza.

E.N.E. [$N. 46^{\circ} E.$] from *Cape Martinet*, one mile and a quarter, is *Cape Negrete*, which has taken its name from its dark colour: it is high, but not very projecting. At about three-quarters of a mile from shore, between the capes *Martinet and Negrete*, are two rocky islets, about half a mile asunder; they are steep-to, and large ships may run between them, as well as between them and the shore. **CAPE LLEBREL**, a promontory of a whitish colour, stands at rather more than a mile E. $\frac{1}{2}$ N. [$N. 63^{\circ} E.$] from *Cape Negrete*. It has a rock above water to the southward of it, between which and the land is a passage for boats only.

CALA LONGA, or **LONG COVE**, is a little harbour, at about half a mile N.E. by N. [$N. by E.$] from *Cape Llebre*; the breadth of the entrance is but a cable's length, and the cove extends half a mile to the N.W. [$W.N.W.$]. The depth of the entrance is 11 fathoms, but it shoals gradually inward, to the beach. This place shelters vessels from winds at N.E., S.W., and N.W., but it is open to the S.E.

At half a mile to the northward of *Cala Longa* is the point of *Cala Blanca*, which is high and white: and, at a mile to the northward from the latter, is the *Punta del Rio*, River Point, of a dark colour, and terminating some high hills. At a short distance to the northward of the latter is the mouth of the River *Sta. Eulalia*, at N. $\frac{3}{4}$ E. [$N. 13^{\circ} W.$], one mile from which is the church of that name.

The **ISLES of SANTA EULALIA** are three islets off *Point Araby*, which is the N.E. point of the bay of *Sta. Eulalia*, at $4\frac{1}{2}$ miles N.E. by E. $\frac{1}{4}$ E. [$N. 41^{\circ} 30' E.$]. The point is low, dark coloured, and projecting; the islets of unequal size, the largest is the farthest from the land. At about half a mile S.S.E. [$S. 41^{\circ} E.$] from the easternmost part of the latter, and 4 miles E.N.E. $\frac{3}{4}$ E. [$N. 55^{\circ} E.$] from *Cape Llebre*, lies the reef

reef or shoal of *Sta. Eulalia*, over which the sea breaks, and it, therefore, requires every precaution during the night, or in thick weather. There is a depth of 16 fathoms around it.

In the Bay of *STA. EULALIA* vessels are sheltered from north-easterly and north-westerly winds. The best anchorage is off *Cala Poda*, about three-quarters of a mile to the westward of Point Araby.

At three-quarters of a mile to the northward of the eastern isle of *Sta. Eulalia* is a smaller one, *La Galera*, and eastward of this is a larger one, *Canà*: both are so near the land as to admit barks only to pass between.

CAPE CAMPANICHE, the easternmost point of *Iviza*, is $2\frac{1}{2}$ miles, N.E. by E. $\frac{1}{2}$ E. [*N. 39° E.*], from Point Araby. Its upper part is high, but it declines to the sea. Off this cape, at the distance of a mile, is the island *TAGOMAGO*, which, from north to south, is about three-quarters of a mile in length: this isle is of moderate height, level from the middle towards the south end, but lower and uneven toward the north: it is steep around, there being one rock only, which is at about a boat's length from the north point. The channel between the island and cape has a depth of 14 fathoms, and is very practicable with a favourable wind.

PUNTA VERDE, Green Point, with a tower and village on it, is half a mile to the northward of Cape Campaniche. At a mile and a half N. by E. $\frac{1}{2}$ E. [*N. 3° W.*] from the latter, is the *Laxa* or *Shoal of Figueral*, in extent twice the length of a ship's launch, steep around, and appearing above water, so that the sea constantly breaks over it. In the passage between it and the land the depth varies from 11 to $7\frac{1}{2}$ fathoms.

The headland named **PUNTA GROSSA**, which is high, perpendicular, and broken, bears, from the north point of *Tagomago*, N. by W. [*N. 30° W.*] $3\frac{1}{2}$ miles. An islet is so close to the extremity of the point as to allow boats only to pass through. Inlet in the same direction, at one mile from *Punta Grossa*, is the low point of *Yoc*, and three-quarters of a mile from the latter, N.N.W. $\frac{1}{2}$ W. [*N. 48° W.*], lie the *Hormigas*, or *Ants*, two small low rocks, distant about a cable's length from shore, off a flat point, on which the sea breaks.

PUNTA DEN SERRA.—At rather more than 3 miles N.W. $\frac{1}{2}$ W. [*N. 68° W.*] from the *Hormigas* Point is **PUNTA DEN SERRA**, the northernmost point of *Iviza*, in latitude $39^{\circ} 6' 22''$. This is of moderate height, level on the top, of a reddish colour, and covered with trees. A ledge of rocks extends from the point about a cable's length to the northward.

On the north side of *Iviza* are several sandy coves, which are resorted to by small vessels. The principal one is *Port Balanzat*, $2\frac{1}{2}$ miles to the westward of Point Den Serra, the western point of which, *Cape S. Miguel*, is lofty and precipitous. This indent extends about a mile to the south, and has a depth of 13 to 5 fathoms, but is too confined to be of importance to a stranger. A mile to the west from *Cape S. Miguel* is *Cape Rubios*, of a reddish colour, and as steep, but not so high, as the former. One mile and a half farther, in the same direction, is *Cape Eubarca*, dark coloured and steep. The *Margarita* Isles lie about three-quarters of a mile from *Cape Eubarca* W.S.W. $\frac{1}{2}$ W. [*S. 53° W.*]: the largest of these is small, but high, and naturally pierced through, so that barks can pass under it: this is next to the land, and between is a deep channel.

FROM the **MARGARITA ISLES**, one mile and three-quarters W. by S. [*S. 40° W.*], are the peak and cape *Nono*, an elevated land, very remarkable from its sugar-loaf shape, covered with trees. The extremity is a high whitish point, steep towards the sea. Three-quarters of a mile to the southward of this Point is *Punta Foradada*, which is likewise high and steep: at a quarter of a mile farther south are the isle and cove *Salada*. At $2\frac{1}{2}$ miles from Peak *Nono* is *Cape Negrete*, of moderate height, and covered with wood: at this point commences *Puerto Magno*, or the *Port of S. Antonio*.

The **PORT of S. ANTONIO**, from *Cape Negrete*, is $2\frac{1}{2}$ miles in depth to the S.E., the breadth of its entrance being half a league. This place is, in summer, a good retreat for men of war, as well as for smaller vessels; the depths decreasing from 20 to 2 fathoms, and even to one fathom at the bottom of the bay; but, in winter, the winds from the North and N.W., which are commonly of long continuance, send in a heavy sea, and the port is then fit for those smaller vessels only, which can run as far in as the soundings may allow. The bottom is, throughout, an excellent holding ground. In taking the harbour there is no difficulty, nor any shoal but what is visible. Whether
a vessel

a vessel comes in from the north or from the west, she has only to steer for the middle of the entrance. So soon as Cape Negrete is in a line with Cape Nono, she will be in 18 fathoms, and hence may run to a depth of 7 or $5\frac{1}{2}$, and there come-to, with the church of S. Antonio about East [E.N.E.]. Vessels should here be moored to the N.E. and S.W., with the best bower in the latter direction. Smaller vessels, that run far up, may moor with one anchor out, and a cable fast on shore. A stream of excellent water falls into the bay, at half a mile to the southward of the church, on the eastern side.

Without the harbour, on the west, the coast forms several points and coves, to the distance of 3 miles, the last projection to the northward being Punta Robira, which declines into the sea. At N.E. by N. [N. 13° E.] 2 cables' length from this point is a rocky islet, *Pajar*, which is steep-to.

On the WESTERN COAST, at three-quarters of a mile S.W. by W. $\frac{1}{4}$ W. [S. 39° W.], is *Punta Pedras*, Rocky Point, which is of moderate height. Two miles to the southward from the latter is the *Cala Moli*, a small open cove, in which small vessels lade timber, when the weather will admit. Two miles farther south is another cove, *Cala Padella*, narrow at the mouth, and curving to the S.E., with from 9 to $5\frac{1}{2}$ fathoms of water, over good holding ground. At S. by W. $\frac{1}{4}$ W. [S. 3° E.], $3\frac{1}{2}$ miles from *Cala Padella*, is Cape Jueu, already described on page 41, with the isle Bedra, &c.

Between *Cala Padella* and Cape Jueu, at about half a mile N. by E. [N. by W.] from the Cape, is a shoal of sand, of 11 feet, called the *Mataret*: during a swell the sea breaks over it. *La Botza*, a sunken rock, over which the sea breaks constantly, lies also at N. by E. [N. by W.] a mile and a half from the easternmost part of Bedra. These must, in course, be carefully avoided, on approaching towards Bedra, &c.

THE CONEJERA, or CONEY ISLES.—This is a group of uninhabited islands, lying off the western coast of Iviza; to the westward of it is a smaller group, the BLEDA ISLANDS. The largest of these is the CONEJERA GRANDE, on the N.E. It is a mile and a quarter in length, from north to south, and of middling height. In an open bay, on the eastern side, is good anchorage. Between this isle and Point Piedras is *Bosque*, or *Woody Isle*, which is half a mile in extent, from N.N.W. to S.S.E.: it is, likewise, of middling height, and steep around, with two lofty rocks at its N.W. end. The isle ESPARTO lies a good mile to the S.W. from the Great Conejera, and $6\frac{1}{2}$ miles to the northward of Bedra: it is three-quarters of a mile in length, from east to west, and is higher than the two isles above described. Under the east end of Esparto is a rocky islet, *Estacio*; the two form a little harbour, having a depth of $4\frac{1}{2}$ fathoms; but, it is to be noticed that, there is a small ledge of rocks on the S.E. point of Esparto. The people of Iviza keep cattle on these islands.

The BLEDDAS and other little isles, lying to the westward of the Conejeras, are not so important as to require a particular description. The passage between Esparto and the southernmost isle is three-quarters of a mile in breadth. The ground around the isles is quite clear, and there is no danger but what may be seen.

THE ISLAND FORMENTERA.

IVIZA with FORMENTERA were called, by the antient Greeks, ΠITYUSÆ, or the Isles of Pines.* Formentera is an irregularly shaped and uneven island: it is, in its highest

* In his interesting description of the *Columbrete*s, (see p. 32,) Captain Smyth has noticed that the Greek geographers applied the name of *Ophiusa* to an Iberian island, from its abounding with serpents; and that the Romans, from the same reason, called it *Colubaria*: hence, he infers that the *Columbrete*s are the antient *Ophiuse*s, although custom has long conferred the name on Formentera: and, "to countenance the application, we have been gravely told of the myriads of snakes which have caused it to remain uninhabited. But a visit to the spot proves the misnomer; for its population, (despite of Algerine ravages,) and its culture, together with the numerous vestiges of matamore granaries, it is readily seen that the present appellation has been a consequence of its corn harvests. Iviza or Ibiza, the *Ebusus* of Strabo and *Ebyssus* of Ptolemy, was undoubtedly called *Pityusa major*, and Formentera *Pityusa minor*,—names which they still deserve from their resinous pine-trees; and the peculiar boast of the natives is, that no venomous reptile can live in Formentera; whether from the presence of the *semper-virens*, one of the snake-roots of antiquity, or that their earth has the quality of destroying serpents, as Pliny records that of Ebusus to have done, I know not."

part, but moderately elevated. The eastern portion, denominated *LA MOLA*, is higher than the western, and between, as shown on the Charts, is a tract of low ground, declining to the sea, and terminating in a sandy beach on each side. Thus the *S.W. point of La Mola* and *Point Anguila*, the S.W. point of the isle, form a low sandy bay, while the land on the east and west of these points increases in height. Much pine-wood still continues upon the island, and there are but few regular inhabitants.

The coast of Formentera is, in general, clear; and, in fine weather, the currents, in general, run to the north-eastward; but, if stormy, they change with the wind.

POINT ANGUILA is situate in lat. $38^{\circ} 40' 30''$, and long. $1^{\circ} 26' 58''$ E. It is steep towards the sea, and even on the surface. At the termination of the cliff to the N.E., a mile distant, is a tower, the *Torre de los Catalanes*. The coast which trends from the point to the westward of north continues high and steep; and, at a mile and a half from it N. by W. [*N.W. by N.*] is distinguished by the tower of Garovaret: three-quarters of a mile thence North [*N.N.W.*] is *Cape Berberia*, or Cape Barbary, which is equally high and steep with the coast southward. From this cape, however, the coast, northward, declines in height; and, at a mile and a quarter from it is *Point Cala Saona*, low and level, but projecting. Hence, at the distance of three-quarters of a mile, is *Point Gavina*, declining from a height, on which stands a tower of the same name. Between these points is the *Cala*, or *Cove*, *Saona*, extending about half a mile inward, with $5\frac{1}{2}$ to $4\frac{1}{2}$ fathoms of water, and therefore, under circumstances, a convenient place of retreat; but it is open to winds from S.W. to N.W., which send in a great sea.

At half a mile N.E. $\frac{1}{2}$ E. [*N. 31° E.*] from the tower of Gavina is *Point Pedrera*, low and projecting; and, at half a mile E.S.E. [*East*] from *Point Pedrera*, are the cove and isle *Sabina*. Here is the mouth of a lagoon, which admits very small boats only. From *Sabina Cove* the land extends north-eastward nearly a mile, to the wharf or place where the salt is laden, which is manufactured at the neighbouring salterns. Before this place are three small low islets.

ESPALMADOR.—We now again arrive at the *ISLA DEL ESPALMADOR*, or *Careening Island*, already noticed on page 41. *Point Espalmador*, on the western side of this island, is level, of a red colour, and steep toward the sea: near it is a tower. To the northward of this point the coast is low, with several inlets. Off the N.E. point is an islet, *Puercos*. On the S.W. side of the isle is a small port, *Espalmador*; it is shaped like a horse-shoe, and vessels sometimes careen there. The depth in the anchorage is 3, 4, and 5, fathoms; the ground oaze and sand. Here you are exposed only to the west: wood is to be had all over the island; and, if necessary, by digging, water may be had.

The *ISLE ESPARDELL*, which lies at the distance of a mile and a quarter from *Espalmador*, is of moderate height, and even on the surface. A portion of its south end is detached, and connected only by a ledge of rocks; and at the north end is a large rock, close to the island. On the western side is a good and useful roadstead, *Estancia*, having 13 fathoms of water. One mile W.N.W. [*West*] from the middle of *Espardell*, and nearly half a mile from the coast of *Espalmador*, is a rocky shoal of 3 fathoms, steep all round.

Between the *Trocados*, or south end of *Espalmador isle*, the coast forms a bay to *Point Prima*, a low but steep point, at the distance of $2\frac{1}{2}$ miles S. by E. $\frac{1}{2}$ E. [*S. 37° E.*]. In the bottom of this bay, between some rocks and the land, are several creeks, particularly one called *Puyols*, which, although the best, serves only for the packet-boat.

From *Point Prima* to the southward, the land rises in height to the distance of half a mile, where it is terminated abruptly by *Point Carnache*, on which is a tower. A wide and open beach, *Playa del Norte*, now extends 3 miles to the south-eastward, and is interrupted by only one small inlet, which admits fishing-boats. In the bay the water is deep, the ground clean and good.

From the north point of *La Mola*, around to the S.W. point, the land is high; and at the latter commences the *Playa del Medio Dia*, or *South Beach*, from which a shallow bank extends outwards, with an indifferent bottom, having $5\frac{1}{2}$ fathoms on its outer edge, and shoaling to 2 fathoms near the beach: this bank reaches to the *Torre de los Catalanes*, already noticed above.

VALVERDE'S BANK.—This bank, according to the report of Vincent Valverde, the master

master of a fishing-vessel, is of indefinite extent, with a depth of 15 fathoms. From its southern edge, the highest lands in Formentera appear above the horizon to the northward. There is no danger on it, but the sea may be agitated over it in violent gales.

MAJORCA OR MALLORCA.

MAJORCA with MINORCA were the **BALEARES** of the antients, by the Greeks called **GYMNESIA**. According to D'Anville, these islands were occupied by the Phœnicians before the Romans seized them, and their inhabitants were eminently distinguished for their dexterity at the sling. The principal city on the first, which stands on a bay upon the western side, preserves the name of **PALMA**.

MAJORCA, called by the Spaniards **MALLORCA**, pronounced *Malyorca*, is, in general, lofty, with ranges of high mountains covering the whole, from the middle to the northern coast, and so closely connected as to leave only a number of deep valleys and gullies between them, bordered by precipices. Of these mountains, the most westerly and most remarkable is a high peak, called, by the natives of the island, the *Puig de Galatzo*, which stands in the latitude of $39^{\circ} 36'$: the highest mountains are, however, those on the north side, called the *Silla de* (Saddle of) *Torrellas*, and the *Puig Mayor*, or Great Peak. There are several others, but less elevated.

From the middle of the island to the south coast, the surface is much lower than on the north, but it presents several hills and agreeable aspects. The principal bays are those of **PALMA**, on the S.W., of **ALCUDIA** and **POLLENZA** on the N.E. The land is finely variegated by corn-fields, vineyards, orchards, and meadows; and its products, including oil, honey, &c., are highly esteemed. The air is, generally, temperate and wholesome, but excessive heat and drought do sometimes cause a scarcity. The inhabitants resemble the Spaniards of Catalonia, but the language of the commonalty is a medley of Limosin, Greek, Latin, Spanish, and Arabic. The capital is an elegant city, and its inhabitants are computed at 10,000. It is fortified in the modern style; has broad streets, spacious squares, stately stone houses, and 22 churches.

PALMA.—The **BAY** of **PALMA** is formed by Cape Cala Figuera, on the west, and Cape Blanco on the east. The bearing and distance from the first to the latter is S.E. [$S. 66\frac{1}{2}^{\circ} E.$] $4\frac{1}{2}$ leagues. The depths all over the bay are 27, 23, and 18, fathoms, sandy bottom, excepting in the vicinity of Capes Regana and Enderrocat, on the eastern side, where the bottom is rocky.

CAPE CALA FIGUERA is much lower than Cape Blanco, on the opposite side, but the shore of both is clean, and may be approached as closely as can be requisite. A tower stands on the summit, near the point, on which, in the night, signals are made of vessels within sight in the offing. On the N.E. of the point is a cove of the same name, and a little more to the north, another, *Portals*. Farther north, on the western side of the bay, are two islets, *Sec* and *Salas*, the first at $2\frac{1}{2}$, and the second at 4, miles from the cape. There is a passage between *Sec* and the shore, in which the least depth is 9 fathoms. *Salas* is high and clean on the outside, but between it and the land is a channel for small craft only. To the north-eastward of *Salas* is the *Cove of Porraza*, a convenient shelter during all winds, excepting those from S.E. and South; with the latter, this spot is dangerous.

Eastward of the Cove of Porraza are three rocky islets, denominated the *Isletas*: the southernmost has a tower on it. The outside is bold-to. On the point next eastward, half a league from the *Isletas*, is the lighthouse, which is lighted every evening; to the north-eastward is another point, *Palayres*, with a square tower on it, much resembling the lighthouse: between these is the cove named *Port Pi*, in the mouth of which a frigate or smaller vessel may anchor, by having a spliced cable from the bow out to the E.S.E., and coming-to between the two points which form the cove, making fast, with four cables, to the rocks on each side, where the vessel will be in from $16\frac{1}{2}$ to 18 feet of water, on a good bottom, and well covered from the sea.

Vessels stand on northward, towards the town of Palma, to the front of the Lazaretto, and all classes may anchor here in 9, 7, and 6, fathoms, the shallowest water that will suit ships of war. From this situation the cathedral will bear E. by N., and the Lazaretto will be in a line with the castle of Belver, bearing N.W. $\frac{1}{4}$ W. The latter is

is an antient structure, with round turrets, on the summit of a little hill clothed with pine-trees, and which is, therefore, a pleasant object from the sea. Between the anchorage for men of war and the Lazaretto is the ordinary station for frigates, xebecs, and smaller vessels: for, in the direction of N.W. $\frac{1}{2}$ W. [N. 69° W.] above mentioned, the ground shoalens gradually until the lighthouse appears in a line with the north corner of the castle of S. Carlos; here the ship will be within a cable's length of the shore, in 4 fathoms, on good holding ground: between that spot, and within a boat's length of the shore, the water shoalens to $2\frac{1}{2}$ fathoms.

In anchoring at the Lazaretto, it is proper to moor N.W. and S.E., for a S.W. wind sends in a heavy sea, and this wind is very prevalent in the winter season. A south wind also sends in a sea, but this is less frequent. Small vessels may run on to the mole of Palma, having only to keep it on the eastern or starboard side. The depth at the point is $2\frac{1}{2}$ fathoms, but it shoalens within very quickly.

CAPE BLANCO, on the eastern side of the Bay of Palma, is of moderate height, perpendicular towards the sea, white, and has a tower on it. The water off it and the adjoining coast is very deep. From Cape Blanco to Cape Regana the coast is reddish, not very projecting, and nearly of the same height, but it declines a little towards *Cape Enderrocot*, on which is a tower. Hence to the Mole of Palma the land is low, with a sandy beach, but the water is deep.

From CAPE CALA FIGUERA to the N.W. by N. half a league, is the rocky islet *Toro*, round and of middling height. On the outside of it, the water is so deep that a ship of war may pass close by it. Between the islet and point within it are three rocks above water, two close to the point and one to the island, so that there is a channel between for vessels drawing less than 9 feet of water. N. by W. [N. 30° W.] 2 miles from Toro, is a larger islet, *Malgrat*. It is higher than Toro and steep around. Between Toro and Malgrat, the coast of Majorca forms a bay or indent; the shore is of a reddish colour, high and steep, and hence called *Pennas Rotges*, or Red Cliffs. The water is deep.

CAPE ANDRICHOL, which is 2 miles N. by W. from Malgrat, is very lofty, perpendicular, and reddish; its summit is covered with pine-trees. The coast between forms the Bay of Santa Ponza, which extends 2 miles to the north-eastward. A cove of the same name is on the eastern side of this bay, and to the north of the cove stands a castle. On the N.W. side of Sta. Ponza Bay is the port of PAgUERA, extending to the N.W. The entrance of this little harbour is about 2 cables over: the ground is clean and water deep, and may contain fifteen or twenty vessels of middling burthen, which may be moored, head and stern, under shelter from all winds. In case of necessity, a ship of the line may advance into $5\frac{1}{2}$ fathoms, for the depth at the entrance is from 9 to 7 fathoms, sandy bottom. This haven may be readily found; for having made Cape Andrichol, a white point of land, of moderate height, will be seen: between this and the bottom of the bay lies the mouth of the haven. The most adverse winds here are those from south-eastward, but they drive in no great swell.

CAPE DEL LLAMP.—This cape is about half a league westward from Cape Andrichol, and is similar in colour, height, and steepness, with trees on its summit. At half a league westward from Cape Llamp is another cape, the *Mole of Andrache*, not so high but steeper than the former, being perpendicular towards the sea, and having a tower on the summit, which, like the cape itself, is of a gray colour. Between these capes is a cove, to which small vessels occasionally resort for timber.

THE BAY OR HAVEN OF ANDRACHE, to the northward of La Mola, is about 3 cables' length broad at the entrance, and the depth here is $6\frac{1}{2}$ fathoms. This place is inconvenient for large vessels, because the water shoalens quickly to $4\frac{1}{2}$, 3, and $2\frac{1}{2}$ fathoms, but is occasionally useful to small. The on-shore winds, from South and S.W., bring in a heavy sea, and then the best station is as close as possible to the north shore, with a cable made fast on the land, in order to be covered, as much as possible, both from wind and sea.

DRAGONERA.—N.N.W. $\frac{1}{2}$ W. [N. $48\frac{1}{2}^{\circ}$ W.] above 3 miles from the Mole of Andrache is the S.W. point of the ISLE DRAGONERA. This isle is of considerable elevation, and extends from S.W. to N.E. nearly 2 miles. There are two towers on it, of which one is on the highest part. The north side is perpendicular towards the sea, and the surface slopes gradually down to the south end. Between the isle and Majorca is a strait, two-thirds of a mile in breadth, in which are two islets and some rocks above water.

CAPE

CAPE GROSER, which is half a league to the north-eastward of Dragonera, is higher than the land to the southward, and steep towards the sea. Close under the cape are two rocks, just above water, and steep-to. Between Cape Groser and Point Dea, a distance of $5\frac{1}{2}$ leagues, there seems to be nothing remarkable on the shore, excepting the towers of *Angelica* and *Dea*, standing on their respective points.

At $3\frac{1}{2}$ miles N.E. by E. $\frac{1}{4}$ E. [$N. 40^{\circ} E.$] from the tower of Dea is the outer point of PORT SOLLER. The entrance of this little harbour is not readily distinguishable by those sailing along the land, being narrow and formed by high lands overlapping each other. The best mark is, the Tower of *Aycate*, which stands on sand-hills, in the bottom of the bay, and which may be seen from without, between the points at the entrance. The circumstances of this bay are, altogether, so disadvantageous, that it cannot be recommended to a stranger: so heavy is the sea when the wind is at N.W. or North, that in no one part of it can even a coaster be safe, even when moored.

NORTHERN COAST.—Between PORT SOLLER and CAPE CATALUNA or CATALONIA, a distance of 9 leagues, there is little worthy of particular description. Cape Cataluña projects, to a certain distance, perpendicularly over the sea, but it is not so high as the land to the westward: on its eastern side is the Cala Figuera, a cove extending to the S.W., but rendered useless by the heavy sea which sets into it. CAPE FORMENTON, the northernmost point of Majorca, is rather more than 2 miles to the eastward of Cape Catalonia. It is of moderate height, steep towards the sea; but, when seen from a distance of 8 or 10 leagues, the eminences of which it consists appear like so many islands. Between the capes is a hill, (*Nefuradade*,) which, at about two-thirds of its height, is pierced through, so that the light through the opening may be seen.

The WHOLE of the NORTHERN COAST, from Cape Groser, on the S.W., to Cape Formenton, on the N.E., is very high, perpendicular towards the sea, but clean. During winds from the North and N.W. it is, however, to be dreaded; for, besides the heavy boisterous sea, which then sets in upon the shore, it frequently happens that vessels near the land are becalmed, owing to an interruption of the winds by the high mountains, and are then driven on shore by the swell. All vessels passing hereabout, should, therefore, stand far out to sea; more especially as there is no convenient harbour or roadstead.

BAY of POLLENZA.—The north point of this bay, *Endosagua*, is about 3 miles S.W. by W. $\frac{1}{2}$ W. [$S.W. \frac{1}{2} S.$] from Cape Formenton. The opposite point, *Negra*, is a mile and a quarter to the southward of it. From Point Endosagua the coast, within the bay, trends W. $\frac{1}{2}$ S. [$W.S.W. \frac{1}{2} S.$] 2 miles, and forms a few coves or small inlets: beyond these is the islet Formenton, near to the land, high, and steep. Two miles within the latter is the point of the castle of Pollenza.

The Bay of Pollenza admits ships of any size; but, if many of the large class were to resort to it together, the greater number would remain exposed to the wind from E.N.E., and a few only would be sheltered.

Immediately on entering the bay, the Point of Pollenza, with a battery on it, will be seen to the W.S.W.: farther back from the shore, on an eminence, stands the castle, above mentioned. Close to the point, the depth of water is $3\frac{3}{4}$ fathoms, and, at a short distance out, from 6 to 8 fathoms. The best anchorage, for a ship of the line, is at about two cables' length to the west of Pollenza Point, in from $5\frac{1}{2}$ to 7 fathoms, sandy bottom: a frigate may run into from $4\frac{1}{2}$ to $3\frac{3}{4}$ fathoms, and smaller vessels more to the north, down to 2 fathoms: but, it is to be observed that, with $3\frac{3}{4}$ fathoms, there are many loose stones on the ground, with large muscles, which cut the cables.

The N.W. wind blows strongly into this bay, with a short sea that prevents boats from carrying out the anchors: it is, therefore, proper to take every precaution in time, and to moor N.W. and S.E., so that the vessel may strain equally on both anchors. In making for the road, with the wind fresh from N.W. and North, it is requisite to be prepared for violent squalls, which come down from the mountains, at times, of sufficient strength to overset a ship, and by which many have been dismayed.

In the bottom of the bay, at 2 miles S.W. by S. [$S. by W.$] from the castle of Pollenza, is a little harbour, called *Port Allas*, very convenient to vessels drawing less than $2\frac{3}{4}$ fathoms, which is the ordinary depth in those situations wherein they can be sheltered; the winds from N.W., North, and N.E., nevertheless, send in a considerable surf.

All along the shores of the Bay of Pollenza, as far as the anchorage or roadstead, the depth is from 11 to 9 fathoms; and, in the middle, from 43 to 18 fathoms, bottom of sand and fine gravel.

CAPE PINAR.—On the south side of the bay stands the town of **ALCUDIA**, at half a mile from shore. On the eastern side, near the sea, upon a lofty peaked hill, stand the chapel and watch-tower of *Na. Sa. de la Victoria*. Without the bay, at a short distance to the S.E. of Cape Negra, is **CAPE PINAR**, which is higher than Formenton, but not so steep, with some pines on the summit, and the remainder of a red colour. From this cape, for nearly 2 miles S.W. by S. [*S. by W.*], the coast bends inward a little, and extends to Cape Minorca. The latter is higher than that of Pinar, more sharply pointed dark coloured, and steep to one half of its height; the rest being covered with trees.

BAY of ALCUDIA.—We have now advanced to the Bay of Alcudia, which may be considered as commencing at Cape Minorca, on the N.W., and at Cape Farruch on the S.E. The bearing and distance, from one to the other, are S. by E. $\frac{1}{2}$ E. [*S.E. $\frac{1}{2}$ S.*] $6\frac{1}{2}$ miles. At half a league to the south-westward from Cape Minorca is *Point Torrents*, low and projecting, but at a short way from a range of hills, not so high as that of the Cape. At about half a mile south-westward from Point Torrents lies the islet *Alcana*, flat, and near the land; from this islet a shoal of rock and sand extends on the south and east to the distance of a cable and a half; and, on its outer edge, is a depth of $2\frac{1}{2}$ fathoms. More than a mile to the west of this islet, on an eminence, stands *Torre Major*, the Great Tower, furnished with artillery, &c. The interior part of the bay extends from the point under this tower to the *Pons*, or entrance of the *Albufera*, a lagoon of considerable extent, formed by torrents from the mountains and high lands.

The best anchorage for a ship of war is nearly mid-way between the islet *Alcana* and the Point of *Torre Major*, at the distance of 3 or 4 cables from the land, in from 7 to $5\frac{1}{2}$ fathoms, fine gravel. A frigate may anchor abreast of the tower, or southward of it, in from $5\frac{1}{2}$ to $4\frac{1}{2}$ fathoms; ground of the same quality, with some patches of sea-weed; mooring N.W. and S.E. Small vessels may run closer in, and lie more northerly on the beach, in from $2\frac{3}{4}$ to $1\frac{1}{2}$ fathoms; observing, at the same time, that farther in, the water shoals suddenly from one fathom to less than one foot. Here will be seen the town of **ALCUDIA**, already noticed, which stands at about three-quarters of a mile from the inner part of the bay; or, at least, the principal church and some of the highest buildings within it.

The Bay of Alcudia, although more open to winds from the N.E. and East, which bring in some sea, is preferable to that of Pollenza, as the ground is cleaner, and more easy to take when the wind is from the N.W. or North, and it is not so subject to squalls from the mountains, excepting only the part of the exterior coast, between the islet *Alcana* and Cape Pinar. The south coast of the bay consists, generally, of low land, and near the middle of it is a low islet, *Porros*. It is clean all round, from the Road of Alcudia to Cape Farruch; at a cable's length from shore the depths are from 3 to $4\frac{1}{2}$ fathoms, increasing at a little farther off to 9, 18, and 20, fathoms. Cape Farruch is not very high next the sea, but the land within rises to a hill, in an eastern and western direction, with an extensive plain on the summit, connected with a chain of other hills, neither so elevated nor so level.

CAPE FARRUCH to the SOUTH-EASTWARD.—At about one mile to the S.E. from Cape Farruch, on an elevated point, stands the *Atalaya*, or Watch-Tower, of *San-Morey*: at a mile and a half, in the same direction from that tower, is *Point Fon Salada*; and, at three-quarters of a mile farther is the tower of *Falconera*, on a steep point, of moderate height, and declining from the high land of the interior. A bare rocky islet, *Lubarca*, lies at two or three cables' length to the northward of the latter: It is steep-to.

At $2\frac{1}{2}$ miles south-eastward from Point *Falconera* is *Cape Freu*, the extremity of the interior high land: near it is an eminence, of a square figure, which appears, at a distance, like an island. The cape is of a dark colour, and steep-to: on its southern side may be seen a great cave, at the back of the point, nearly pierced through by the sea: on the land above this is the watch-tower of *San Yaumal*.

CAPE PERA, the easternmost point of Majorca, is 2 miles S.S.E. $\frac{1}{2}$ E. [*S.E. $\frac{1}{2}$ E.*] from Cape Freu. It extends outward to a considerable distance, is of moderate height, and level on the summit, on which a tower stands perpendicularly over the water; and thus,

thus, being higher towards the point than towards the interior, the land here, at 6 or 8 leagues off, has the appearance of an island.

S.W. [S.S.W.] $2\frac{1}{2}$ miles from Cape Pera is the Point *Fon de la Cala*; and, at a mile and a half farther, in the same direction, is *Cape Bermeio*, or Red Cape, so called from its colour, and seen from sea to two-thirds of its height, the remainder being covered with pine trees. This cape is broad and lofty, has a tower on its summit, beyond which another, *Masot*, farther up the country, is seen. At about a mile and a half W.S.W. $\frac{1}{2}$ W. from Cape Bermeio is *Cape Ratx* or *Ratche*, lower than the former, dark coloured, and extending outward to a short distance only.

BAY OF ARTA.—Cape Ratx, above mentioned, is the north point of the Bay of ARTA, which extends thence southward to *Amer Point*, a distance of 4 miles. The latter is low, though projecting, and has a castle: the coast of the bay is also low. Within the bay several rocky islets form what is called *Port Vey*, a shoal spot, open to winds from S.E., &c., which may be known by the castle or tower of *Port Vey*, westward of those rocks, upon a steep round eminence.

On the north side of *Point Amer*, at a convenient distance, is good anchorage for vessels of every class, in from 13 to 9 fathoms, sandy bottom, and good holding-ground, sheltered from winds between S.W. by the West to N.W. Should the wind here even change to blow on shore, it will be easy to get under way to the northward, should weathering the cape to the southward be attended with any difficulty.

The CALA, or COVE, of MANACOR lies nearly 4 miles W.S.W. $\frac{1}{4}$ W. [S.W. $\frac{1}{4}$ W.] from *Point Amer*: it has a tower over its western point, and may be readily known, although the coast is generally low and even. It is capable of receiving small coasters only, which lie sheltered in all winds.

At 7 miles to the south-westward of Cala Manacor is PORT COLON, another little harbour for small vessels, but nearly choked up. Between are several small coves, but no place of shelter. On the N.E. point of the entrance of Port Colon is a tower, which is a useful mark for the spot, as there is no other near it. A vessel here may safely approach, for just under the point is a depth of 9 fathoms.

CALA LONGA, *Long Cove*, is a league and a half to the south-westward of Port Colon. Its entrance is wider than that of the latter, and opening to the S.E. [E.S.E.] Under the S.W. point of this entrance is a shoal of $5\frac{1}{2}$ feet, within two boats' length of the land. This port admits frigates, which should moor head and stern, in from $3\frac{1}{2}$ to $4\frac{1}{2}$ fathoms, to the westward of the entrance, there not being room to swing in. This place, however, is not to be made out by a stranger without some difficulty, the coast being very even.

SOUTH COAST.—BETWEEN CALA LONGA and CAPE SALINAS, the southernmost part of Majorca, are several little harbours and places of shelter, known to the coasters.* Cape Salinas is low, well-wooded, and has, on its highest part, the round tower of *Negosta*, whence the land gradually slopes downward to the sea, and a shoal thence stretches out to the distance of half a cable's length: but, at three cables, is a depth of 9 fathoms.

PORT COMPOS, which is nearly 4 miles to the north-westward from Cape Salinas, admits small coasters only. On its western point is a tower, and beyond this some rocks above water, with the salt-marshes and salt-works which supply the island with this valuable commodity. The land hence, on the N.W. to *Point Negra*, is low: but on this point stands the *Tower of Estedella*; and, at a mile and three-quarters within, or to the eastward of, the latter is the *Tower of Rapita*.

CAPE GROSSO is about 2 miles to the westward of *Point Negra*. Here the land increases in height, and thus extends, nearly 5 miles, to CAPE BLANCO, already described on page 47.

* Of these, *Port Petro*, a mile to the southward of Cala Longa, may be known by its square watch-tower, on the south point of the entrance. Within this harbour, on the south side, is a creek. The entrance is only 50 fathoms broad, and has a depth of 15 fathoms; farther in it is shallower: the best anchorage is on the starboard side, where a vessel may be sheltered from the sea-winds. The depths in the middle are from 9 to 12 fathoms. You moor with one anchor out, and a cable fastened on shore, with the vessel's stern to the N.E., where there are 3 or 4 fathoms of water, on oazy ground. Wood may be obtained on the starboard side of the entrance, but no good water.

CAPE BLANCO, having a round tower, and CAPE CALA FIGUERA, as already shown, are the two outer points of the BAY OF PALMA. The latter bears from the former N.W. [$N. 66\frac{1}{2}^{\circ} W.$], $4\frac{1}{2}$ leagues. The coasts here are bold, but the bay is quite exposed to South and S.W. winds. The city of Palma may be easily recognized by its churches, and particularly the cathedral, which stands near the walls, toward the sea. The mole of Palma extends about 150 fathoms into the sea, and has a fort on its extremity: within it are from 15 to 10 feet of water. Near some windmills, at the S.E. of the town, water may be obtained.

CABRERA.—This island, lying off the south coast of Majorca, is uncultivated, and its productions are a few wild goats and water. The only inhabitants are comprised in a very slender garrison, which occupies a fort at the entrance of the haven. The middle of the island is situate in latitude $39^{\circ} 7' 30''$, long. $2^{\circ} 59' 0''$ E. The land is level, but considerably elevated, and the extent about 3 miles from N.E. to S.W. The coast about it is generally clean, with deep water and sea-weed.

On the south side, about the middle of the isle, are four rocky islets, the *Estellens*: the ground around them is clear, and the water deep. On the S.E. end of Cabrera is another and larger islet, *Imperial*, which is higher than the former, and equally steep-to. *Cape Ventoso* is the N.E. point of Cabrera; and, at one-third of a mile from it, to the northward, is *Redonda*, an islet larger than *Imperial*, between which and the cape is a channel admitting vessels of every description, the depth being from 9 to 11 fathoms.

At a mile N. by W. $\frac{1}{2}$ W. [$N. 35^{\circ} W.$] from Cape Ventoso is the S.W. point of CONEJERA ISLAND. The channel between has a depth of 9 to 11 fathoms. Off the north side of Conejera are four rocky islets, the *Planas* and *Ne Furdade*. The latter is the highest, and is pierced through. From the Furdade to Cape Salinas the distance is $5\frac{1}{2}$ miles, and the depth in the middle of the strait is from 18 to 23 fathoms, shoaling gradually to 9, within three cables' length of each coast.

Hereabout strong currents are frequent, generally following the direction of the wind.

CAPE LEBECHE is the N.W. point of Cabrera: on it is a cave, in the precipice, called the *Bishop's Cave*, at the entrance of the haven. A vessel having advanced thus far will see *Creveta Point*, on the eastern side of the entrance, within which is the small fort, already noticed. The breadth of the entrance is about a cable's length, and the depth from 18 to 23 fathoms, clear ground, so that a large ship may run close to the land. Having passed *Creveta Point*, there is another to clear, *Castellar*, at a cable's length to the S.W.; immediately beyond which, on the beach, are some fishers' huts, and off these is the proper anchorage, in from 9 to 7 fathoms.

Should it be requisite, when in the haven, to moor with a cable on shore, this should be done on the east side; otherwise a ship may moor on the swing, with two anchors, both ways being practicable and safe; the haven being roomy and deep, and the shore on both sides clean. The on-shore wind is the north, toward which the entrance is open; but the haven is sufficiently covered by the land on both sides.

In proceeding for this haven, with a strong N.W. wind, great caution is required so soon as Cape Lebeche appears in that quarter; for all the way up from it to the anchorage, violent whirling squalls sometimes come down from the high lands, sufficiently powerful to upset, or, at least, to dismast, any vessel. Equal attention is required with the wind at East, although the squalls from that quarter are, in general, less furious than those from the N.W.

The tides here are very irregular, rising or falling a foot or two, according to the state of the winds.

THE ISLAND MINORCA OR MENORCA.

THIS island is of moderate height; its surface level, with one remarkable elevation towards the middle, called *Mount Toro*, having on its summit a convent, dedicated to the Virgin. The air is moist, and soil rather barren, being chiefly calcareous, with lead and fine marble. The principal harbours are, PORT MAHON,* at the east end, so named

* The PORTUS MAGONIS of the ancients.

from Mago, the Carthaginian general; *Fornells*, on the north side, and *Ciudadella*, on the west.

PORT MAHON.—The entrance of this excellent harbour, which is not more than two cables' length broad, lies in latitude $39^{\circ} 52' 15''$, and longitude $4^{\circ} 23' 40''$ E. At a mile up, on the western side, is the town of *ARRABAL* or *ST. GEORGE*; and, at a mile and a half more, on the same side, is the town of *MAHON*. The whole of this harbour has been most accurately surveyed by Captain Wm. Henry Smyth, and to Captain Smyth's chart of it is attached the following note:

"The town of *MAHON* [*Maon*] was founded by Mago, the Carthaginian, and is the chief commercial place in Minorca; the harbour is esteemed one of the finest and most commodious ports in the Mediterranean, on which account it was made (during the late war) the winter rendezvous of the English blockading fleet from before Toulon. The tides affect it very inconsiderably, as they observe no regularity, ebbing and flowing a foot or two, as they are influenced by the wind. The land on the north side of the harbour is extremely barren, producing little or nothing, except myrtle, great quantities of which are used in the tanneries of Mahon, breaming of vessels, and providing ships with brooms. The south side assumes a better aspect, being in a good state of cultivation, laid out principally in gardens, orchards, and orange-groves, which afford a plentiful supply of refreshments for a fleet. The mathematical master of the College of Cadets, which was removed from Madrid to Georgetown in 1808, informed me that, by a mean of several astronomic operations, the Parade (in Georgetown) is situated in $39^{\circ} 52' 55''$ latitude N., and $10^{\circ} 39' 40''$ long. E. of Cadiz." From Greenwich $4^{\circ} 22' 18''$ E.

Tofino's directions for the harbour are as follow:—"In taking the harbour of Mahon with a fair leading wind, the only thing necessary is to stand along the middle of the entrance, until the ship has arrived within *Point Philipet*, leaving it on the starboard side, and having left on the larboard the point on which stand the ruins of Fort St. Philip, among which are still preserved some low batteries. Having cleared these points, vessels of any size may run very near either shore of the harbour, the depth, close under both, being $4\frac{1}{2}$ fathoms, increasing to 11 and 16 fathoms in the middle; but it is common to choose the south shore, running between it and *Quarantine Island*. When arrived at *Pedreria Cove*, which is opposite to the Lazaretto, if it be with a ship of the line, or a frigate, it will be necessary to keep pretty close to the south shore, in order to pass between it and the *Isla del Rey*, or Bloody Island, on which stands the naval hospital, and *Rata*, or Rat Island, which is a large rock to the westward of it. You may pass between the two islands, the least depth, in the channel, being $4\frac{1}{2}$ fathoms; but it is to be observed that the passage is narrow, and should not be attempted by those who are unacquainted with the ground.

Having passed both islands above mentioned, ships may boldly advance to either shore, to within half a cable's length, up to the town of Mahon, on the south side; and, on the opposite side, abreast of the island, where lies the sheer-hulk, and off the arsenal and dock-yard adjoining, which are connected to the isle by a bridge, at its N.W. point. Here they may come to an anchor in from 5 to $6\frac{1}{2}$ fathoms, good ground, and moor E.N.E. and W.S.W. [*N.E.* and *S.W.*]

IN TAKING the HARBOUR of MAHON, with scant or contrary winds, that is, with winds from the N.E. round by N.W. to S.W., attention must be given to a shelf of rocks, stretching to the southward from the western point of *Mola Cove*, on the north side of the entrance, and to the distance of one-third of a cable, where the depth is 3 fathoms, quickly increasing farther out. Equally to be regarded is a reef stretching from *Point Philipet*, more than half a cable to the South [*S.S.E.*], where the depth is 3 fathoms, and quickly increasing to 4 and $4\frac{1}{2}$ fathoms. On the opposite side, from Point St. Philip, another reef extends half a cable out to the eastward. The water breaks over these three reefs, when there is even but little swell, to one-half of their length; but, when there is much sea, it breaks all over them. Hence it is that, when the entrance of the harbour is seen obliquely, with the points in a right line, or nearly so, the whole seems to be one continued shoal.

Nearly opposite to Philipet Point, and close under the battery of St. Philip, from the point called *Es Redo*, is another shelf, extending nearly one-third of a cable from the shore. On this the sea never breaks, unless during a violent gale from the North or N.E., at which time it is dangerous. It is also to be guarded against with the wind at S.W.,

S.W., because, with a scant wind, it is necessary to haul up, towards the shore bordered by this reef, as much as prudence may admit.

Should the weather be either too unfavourable, or too rough, to allow a vessel to weather all these shoals, she may come to an anchor between them, or farther out, in 18, 23, or 27, fathoms, on good ground. It is, however, to be noticed that, in such a position, without the shoals, there is always a great swell with the wind fresh from the North.

CAPE MOLA, a promontory of the peninsula of Santa Anna, which forms the north side of the entrance of Port Mahon, is distinguished by a signal-tower. This cape, according to the observations made by Captain Smyth, in 1812, stands in lat. $39^{\circ} 52' 45''$, long. $4^{\circ} 24' 15''$. The variation then was $19^{\circ} 36' 30''$ W. The cape is of moderate height, but perpendicular over the sea: it has three high rocks near its base, which, being clean and steep-to, may be approached without danger. The signal-tower on the cape communicates with another, which stands to the northward of the naval arsenal, and opposite to the town of Mahon, in lat. $39^{\circ} 54' 12''$, and long. $4^{\circ} 20' 50''$ E.

The following Directions for Port Mahon have been written by a British Officer:— “By bringing *Mount Toro*, a large hill, near the middle of the island, to bear N.N.W. $\frac{3}{4}$ W. [*N.W. $\frac{1}{2}$ W.*], and steering direct for it, it will lead you to the entrance, into which you must not attempt to sail without a fair wind: there is tolerable good anchorage in moderate weather, with off-shore winds, in 17 fathoms of water, on fine sand, with *Mount Toro* on the middle of the entrance, and *Cape Mola* N.E. $\frac{1}{4}$ E. [*N.E. by N.*]: here ships may lie to wait an opportunity to go in. The mark for sailing into or out of Mahon Harbour is, a large farm-house with a walled garden round it, called *San Antonio*, or the *Golden Farm*, just open of the Lazaretto Point, below *Quarantine Island*, on the N.E. side, bearing N. by W. $\frac{1}{2}$ W. [*N.W. $\frac{3}{4}$ N.*]; this mark will carry you clear of the rocks that lie off the points of the entrance, in 8, 9, or 10, fathoms of water. In a fair-way from off *Cape Mola*, you will have 17 or 14, 13, 9, 8, fathoms. When you are within the north point of the entrance, you should keep near the middle, on account of the shelving rocks, which lie on each side, close to the shore: you pass *Quarantine Island*, which is the first, on your starboard side, and may anchor before you get as high up as the second, on which the hospital stands, called *Hospital Island*, where you will have good ground in from 6 to 13 fathoms of water, secure from all winds. On the S.W. side of the entrance, close to the sea-side, is a fort, with several houses, by which you may know the entrance at a distance.

“In this port there is excellent water, which may be had in any of the coves; where the water is so deep, that ships of 300 or 400 tons may lie along side the rocks. There is no possibility of getting out of the harbour without a leading wind.”

N. E. COAST.—FROM PORT MAHON TO THE NORTHWARD.—At the distance of 200 fathoms, nearly E.N.E. from *Cape Mola*, is the extremity of *CAPE ESPERO*, the easternmost point of the peninsula of Santa Anna: and, at nearly a mile and a half N. by W. [*N. 32° W.*] from *Cape Espero* is *CAPE NEGRO*. The coast between is rocky and irregular, and it forms several indents, which are open to the N.E. *Cape Negro* has been so called from its dark colour, and is of moderate height. At a mile and a quarter to the N.N.W. from *Cape Negro* are two coves, the *Old and New Mesquita*; both are unimportant, although they contain a small extent of low beach, which is not the case on any other part of this coast. Before these coves lie two rocks, above water, called the *Mesquita* and *Bombarda Rocks*, which resemble the hulls of ships, keel upwards. The southern rock is foul, has a little swell on it, and the sea breaks all over the sunken rocks which surround it.

On this part of the coast, not only is the bottom generally rocky, but many anchors have been lost. It is, therefore, hazardous to attempt anchoring here, even in summer; and, in winter, the loss of every vessel making such attempt may be expected.

At a mile to the northward of *Mesquita Coves*, inclosed by cliffs, is the *Cove of Benillantí*; and, at the same distance to the northward of the latter, is the *Punta Galera*, which here terminates the clifty coast. At *Punta Galera* is a rock above water, called *Judia*, or the Jewess: between it and the land is a passage for boats only. We now arrive at the Point and Port of *Albufera*, or *La Bufera*: the latter a shallow and inconsiderable inlet. At a mile to the northward [nearly N.N.W.] from *Punta Galera* is the *Isla Colon*, so called from the quantity of wild doves or pigeons frequenting it. This islet.

islet is elevated towards the north, declining to the south. Its extent is only three-quarters of a mile, and the channel within it is too narrow for any but fishing-barks. About its eastern and southern points are some rocks above water, and a sunken rock, of 11 feet, lies without, at the distance of about a cable's length.

COLON.—A small inlet of Minorca, to the west of Colon Isle, forms, however, an occasional retreat for small vessels. It is called *SESLLANES*. In taking this place, it is to be observed that there is a rock above water, called the rock of *Arenal del Moro*, which must be cautiously avoided: this rock lies close under the island, and, having passed it to larboard, a vessel may ride in from $5\frac{1}{2}$ to 6 fathoms, with an anchor out to the N.W., and a cable first to Colon Isle on the S.E. This position is sheltered from all winds but N.E., the latter bringing in a swell: but even with this there is little risk, if the anchors and cables be good.

Vessels of similar description may, also, lie on the S.E. side of *COLON ISLE*, with an anchor to the S.E., and a cable fast on shore upon the isle to the N.W., in from $5\frac{1}{2}$ to 6 fathoms, sandy ground. This spot is sheltered from all winds but those from E.N.E. to E.S.E., which cause a heavy and dangerous sea. From this roadstead, if requisite, small vessels may run into the little haven to the west, which is called the *GRÃO*, and extends half a league to the west. This inlet is shallow, and has sunken rocks at the two points of its entrance; but, within it, those that can enter may find shelter from all winds. It is, of course, requisite to keep in mid-channel between the points.

In anchoring on the S.E. of Colon Isle, the rock, called the *Judia*, already noticed, will be seen on the larboard side, and beyond this the point called that of *Fray Bernat*, where the low shore begins, without which is the proper anchorage.

CAPE MUSENE VIVES.—This cape lies about a mile and three-quarters to the North [*N.N.W.*] from the north point of the isle Colon. It is high and steep, though not very projecting, and a reef extends from its point three-quarters of a mile to the east, at the extremity of which the depth is $5\frac{1}{2}$ fathoms. At half a mile to the northward, from the end of this reef, is *CAPE FAVARITCH*, and the coast between forms a deep bay. Cape Favaritch is low at the outer point, and, when seen at the distance of 3 leagues, appears like three islands.

NORTH COAST.—**PORT OF DADAYA.**—At $3\frac{1}{2}$ miles to the westward [*W. by N.*] from Cape Favaritch are the islets and haven of *Dadaya*, with the haven of *Moli*. These places, being narrow and shallow, admit small vessels only. In taking the haven of *Dadaya*, it is necessary to keep under the western shore, called *Noucous*, which is clean, leaving the islands on the larboard side; and, having run up beyond another islet within the haven, you may bring up in $3\frac{1}{2}$ fathoms, opposite to the mouth of *Cala Moli*, a cove lying to the westward of the island in the entrance of the haven. Should it be desirable to run farther up, you may pass the island above mentioned, and choose any convenient station within the haven, which extends about a mile to the S.S.W. and South.

The depth at the mouth of Port Dadaya is $6\frac{1}{2}$ fathoms; within a boat's length of the shore of *Noucous*, $2\frac{3}{4}$ fathoms; and, at the mouth of *Cala Moli*, $3\frac{3}{4}$ fathoms. At the entrance of the interior haven of *Dadaya* the depth is but 11 feet, but the water deepens gradually inward, to some distance.

At the distance of one-third of a cable from the S.E. side of the largest *Dadaya Isle* is a small round islet called *Aguila* or the *Eagle*: the pass between is fit for small craft only. To the N.W. from the Little *Dadaya* a ledge of rocks extends to the distance of more than a cable and a half, where there are $5\frac{1}{2}$ fathoms. In moderate weather this ledge is not dangerous, but the water breaks all over it during a gale.

The N.W. point of the Haven of *Dadaya* is called *Punta den Falet*, and from this point the coast of Minorca trends to the north-westward, one mile and a quarter, to *Punta Scodola*. It then trends to the southward, about a mile, and forms the *Arenal* or *Sandy Cove of Castel*, whence again it changes to the *West* and *North*, true, to Cape *Pentinat*, though interrupted by several inconsiderable indents.

CAPE PENTINAT is a low head bearing N. by W. [*N.N.W. $\frac{3}{4}$ W.*] $2\frac{1}{2}$ miles, from *Punta den Falet*. It is a low head, stretching but a short way out, but from which the coast is high and precipitous to the N.W. by N. [*N.W. by W.*] about half a league, where it terminates in *Cape Morteret*, the eastern side of the entrance of the Port of *Fornells*. Cape Morteret is high, very steep towards the water, and has, on its summit, a watch-tower.

PORT or HAVEN of FORNELLS.—This is the only harbour of importance on the north side of Minorca. Its entrance lies between *Cape Fornells*, on the west, and *Cape Morteret* on the east. The harbour is land-locked, sheltered on every side, and capable of containing many ships, of every class. The entrance is narrow, but its depth is from 15 to 18 fathoms. In taking the harbour, every danger may be seen, as there is none under water. The North winds blow directly in here, and if a vessel enters even with the wind at North or N.E., it will be necessary to carry a press of sail, in order to have way enough to run, without tacking or otherwise working the ship, through different gusts of wind which may be found, sometimes foul and sometimes fair, abreast of the high point of *Mola*: beyond this the wind is much more steady.

The entrance may be known by a small tower standing on the eastern point of the harbour. A little within the western point is a fort with four bastions. On coming from the S.E. with an intention of entering, you may range along the eastern point at discretion, and you will thus see the harbour's mouth and the fort above mentioned. The usual anchorage for men of war is off the fort on the western shore, where also stands the town of *Fornells*, in from 7 to 11 fathoms, mooring East and West. You may also anchor within a cannon-shot of the fort, in from 4 to 6 fathoms, on mud and weeds. There is a depth of 7 fathoms, as high as the islands which lie on the eastern side, which side has rocky bottom. In the harbour are also several dangerous shoals, so that it is requisite to all who are unacquainted with it to have a pilot.

At half a mile to the westward from *Cape Fornells* is *CAPE ANFOS*, a point from which the coast trends to the southward, and forms the eastern side of a spacious bay, which terminates at *Cape Levante*, and contains several small inlets. On the latter, the *Arenal* or *Sandy Cove* of *Tirant*, in the S.W., is the chief.

FROM *CAPE MORTERET* the bearing and distance to *Cape Levante* are N.W. [N.W. by W. $\frac{3}{4}$ W.] 2 miles; and, a little farther, in the same direction, is *Cape Caballeria* or *Naucelles*, which, towards the sea, is projecting, high, and steep; but within the cape the land inclines downward, so that, at a distance, either from east or west, the cape appears like an island.

At a mile to the westward from *Cape Caballeria* is *Porros* or *Sanitge* Island, the north side of which is of moderate height, but the south very low. The passage between it and the cape has many rocks, both above and under water, and can be used in small vessels only, by those well acquainted with it.

PORT SANITGE is a small harbour, three-quarters of a mile to the South [S.S.E.] of the isle above noticed: it is a cove which will admit vessels of a middling size, and which may here lie sheltered from all winds, by mooring head and stern, abreast of a precipice and cave on the western shore, in $3\frac{1}{2}$ fathoms. The mouth of this harbour is from $1\frac{1}{2}$ to 2 cables in breadth, and the depth inland about half a mile. In proceeding, the Isle *Sanitge* is left on the larboard side, and a large rock above water, which lies at a cable's length from the west point of the harbour, is to be left on the starboard. A vessel may take the ground without injury, the bottom being entirely of soft mud.

An islet, named *BLEDA*, similar in extent to *Porros* or *Sanitge*, lies at the distance of half a league from the latter, nearly West [W.S.W.]. It is high, and there is a pass between it and *Cape Salayro*, but fit for small coasters only. The two isles, *Porros* and *Bleda*, mark the two sides of an extensive sandy bay, which has in it several unimportant inlets.

To the N.W. by W. [W. by N.] one mile and a third from *Bleda* is the *Cliff of Anti-christo*, a lofty and precipitous portion of coast; and, at a mile and three-quarters from this, in the same direction, is a broad point, called *Falconera del Farinet*. From *Falconera* to *Cape Grosso* the bearing continues as above, and the distance is one mile and a third: in the middle of the coast between are the cove and fort of *Tauler*.

FROM *CAPE GROSSO* to the next prominence, the Point of *Fray Bernardo*, the bearing and distance are N.W. by W. $\frac{3}{4}$ W. [W. $\frac{3}{4}$ N.] 2 miles: between these headlands is *Punta Roxa* (Red Point). Between *Punta Roxa* and *Cape Grosso* is a small sandy cove, named *Cala Carbo*: and, at about a quarter of a mile from *Punta Roxa*, to the West, is *Punta Fontanellas*, on the eastern side of the entrance of a small river, which extends up the country to the S.S.E. [S.E.] 3 miles. On the south side of *Fontanellas*, is the low shore of *Algairens*; and, between the latter and the point *Fray Bernardo*, is the *Codolala de Bini-atran*, with a rocky islet close to its shore.

At

At about one mile and a third N.W. by W. $\frac{1}{4}$ W. [*W. $\frac{1}{4}$ N.*] from Point Fray Bernardo is the Point of *Secullas*, eastward of which are the Coves of *Furadada* and *Moralla*. At a mile to the westward of Secullas is the cove of *Enderrosay*, and to the westward of the latter are the coves called *Moter* and *Pous*. None of these coves or spots of beach can be useful to any vessel above the rank of a fishing bark.

NORTH COAST of MINORCA in GENERAL.—Here it is to be noticed, that no part of the north coast is fit for anchorage; the water being very deep, while the most prevalent wind is from the North, which causes a very heavy sea towards shore.

The WEST COAST.—*Cape la Sella*, or *Point Nati*, may be considered as the N.W. point of Minorca. It is of moderate height, and precipitous, with a rocky islet just before it, close to which is a depth of 16 fathoms. There are, also, several rocks in the vicinity. At a mile to the south-westward from Cape Sella is *Punta Espardina*; at three-quarters of a mile, more to the south, is *Cape Perpigna*; and, at 3 miles W.S.W. $\frac{1}{4}$ W. [*S. 50° W.*] from Cape Sella, is *Cape Minorca* or *Bayoli*, the westernmost point of Minorca, which may be known by the watch-tower on its summit. From the tower, the land, in its descent, seems to form two steps. The cape is of no great height, but is steep towards the sea. The depth of water near it is 18 fathoms, with good holding ground.

At a mile and a half from Cape Bayoli or Minorca, S. by W. $\frac{1}{4}$ W. [*S. $\frac{1}{2}$ E.*], is *Cape den Banicous*: the coast between is low, but steep-to. At the same distance S.E. by E. $\frac{1}{4}$ E. [*E. by S.*] from the cape is the mouth of the haven of CIUDADELLA.

CIUDADELLA.—CIUDADELLA ranks as the capital of Minorca, but its haven is a small creek, so narrow that a brig, in good weather, has hardly room to tack in it. It extends inward to the N.E. and E.N.E. The depth at the mouth is 6 fathoms, but it decreases gradually to half way up, where it is only 11 feet, all sand and gravel. On the N.W. shore of the haven are two little creeks, but they are too shallow to be useful. With the wind from the West or South, a heavy swell sets into the mouth of the haven, and, even higher up, such winds produce a strong run in the water up and down, which strains the anchors and cables severely. When the wind does not prevail from the S.W. quarter, vessels may come-to safely, without the entrance, in any depth less than 18 fathoms, the ground being every where good. The haven may be readily known by the sight of the town of Ciudadella, and the chapel of St. Nicolas, having a battery, which is situate on the south point of the haven: for this point vessels entering should steer, and run close under it, on the starboard side, the point being perfectly clean.

From the Haven of Ciudadella the coast trends nearly S.S.W. [*South*] 2 miles. It is low, but steep-to, and broken by three insignificant coves, open to winds from the S.W., which bring in a heavy sea. The coast hence trends to the S.W. [*S.S.W.*], one mile and a half, to *Point Negra*, which projects but a little to the westward. Hence to *Cape Dartuch*, the S.W. point of Minorca, the bearing of the coast is S.S.W. $\frac{1}{4}$ W. [*S. by W.*] one mile and a quarter.

SOUTH COAST.—CAPE DARTUCH is so low and flat, that, on approaching to it in a boat, a man may easily jump ashore; it is, however, clean and steep, the depth at two cables out being from 16 to 18 fathoms, and this is equal to what is found all the way hence to the entrance of Ciudadella, at the same distance from land.

FROM CAPE DARTUCH eastward, to a point distinguished by the watch-tower of Dartuch, which bears from the cape nearly S.E. by E. [*E. by S.*] 4 miles, the coast becomes more elevated, and is variegated by several little coves and points. Close to the watch-tower is a rock above water, and here is the highest land of this portion of coast, which appears partly of a white, and partly of a red, colour.

PUNTA PRIMA is a mile and a quarter to the westward of the watch-tower of Dartuch; and, at S.E. $\frac{1}{2}$ S. [*S. 70 $\frac{1}{2}$ ° E.*] from Cape Dartuch, and at S.S.W. $\frac{1}{4}$ W. [*S. 5° W.*] half a mile from Point Prima, is a shoal, on which the water breaks when there is a heavy sea. This shoal is small, but dangerous to small vessels passing or beating up when near it: between it and the shore is a passage, but it is not to be attempted by strangers.

ST. GALDANA COVE.—At S. by E. $\frac{1}{4}$ E. [*E. by S.*] a mile and three-quarters from the watch-tower of Dartuch is a projecting point, which forms the western side of the entrance of the *Cala de Santa Galdana*, the most capacious inlet on the southern coast of Minorca. This cove is capable of receiving vessels of middling burthen, which may here

here lie sheltered from all winds but those from the West. It is, however, to be noted that, with westerly winds, several vessels have been lost here, from the heavy sea then rolling in at the mouth of the cove. From the mouth the harbour bends eastward to the spot in which vessels usually lie, where the depth is $3\frac{1}{2}$ fathoms, on a sandy bottom. Inward the water gradually shoalens.

FROM ST. GALDANA COVE, *eastward*, the coast declines in height; and, in a distance of $9\frac{1}{2}$ miles S.E. $\frac{1}{4}$ S. [S.E. by E. $\frac{1}{4}$ E.] where stand the *Penas or Cliffs of Alayor*, it is varied by several spots of beach. The name of Alayor distinguishes a part of the shore which appears of a red colour, lofty, and steep, and having a tower on the summit. From these cliffs eastward the shore again declines in height: but it is steep-to. Between Sta. Galdana and Alayor are several insignificant coves and two islets, which require no further notice.

At $5\frac{1}{2}$ miles to the S.E. by S. [S.E. by E.] from the watch-tower of Alayor is a projecting point called *Cabo del Fonts*: between are six coves, visited by fishing-vessels only. To the eastward of Cape del Fonts are two other coves, frequented only by small coasters. At $2\frac{1}{2}$ miles to the south-eastward from Cape del Fonts is the S.W. point of the cove of *Bini Beca*, having two rocks before it, and of no more consequence than those to the westward. The point is situated S. by W. $\frac{1}{4}$ W. [S. $33\frac{1}{2}^{\circ}$ W.] one mile from the *Atalaya*, or watch-tower, called the *Great Tower of Bini Beca*, upon which signals are made of all vessels appearing to the southward of the island; and these are answered by the signal-tower above the arsenal at Mahon.

With the watch-tower of Bini Beca bearing nearly N. by E. [N. 60° W.] and at about two cables' out from the shore, lies a shoal called the *Caracol*, which is about thrice the length of a ship's launch. At low water it appears above the surface, but is at all other times covered, and the sea mostly breaks over it. At one-third of a cable to the south of the shoal, the depth is more than 7 fathoms, sea-weed on the bottom; and in the passage between the shoal the depths are from $3\frac{1}{2}$ to $4\frac{1}{2}$ fathoms.

ANCHORAGES.—OFF THE WHOLE OF THE SOUTHERN COAST OF MINORCA, between Cape Dartuch and the Bay of Bini Beca, there is good anchorage during northerly winds, in from 16 to 18 fathoms. For taking it, observe that the *summit* of Mount Toro, which is near the middle of the island, must be kept in sight over the land of the coast: for if the mount be entirely hidden by the southern land, or if too great a part be visible, the vessel will be over rocky ground.

To the eastward of Bini Beca is a cove, called *Bini Aucolla*, having near it a rocky islet. The land between is low, but it again rises a little, under the name of *Esqueros*, as far as the point of *Cova de Corps*, the S.W. point of Minorca. The roadstead of *Esqueros* is an excellent place of retreat during winds from N.W. to N.E., all along from the point of Bini Beca to the west part of the *Isla de Ayre*, on the S.E. The depths are from 14 to 22 fathoms, sandy bottom, not far from the land, and taking care not to approach too near the Caracol shoal, which has been described. The best spot in the road is to the S.E. of the shoal, and westward of the *Isla Ayre*, with the tower of Alayor over the top of Cape del Fonts.

At half a mile to the eastward from Point Cova de Corps is *Punta Algaret*: between is a cove called *Ensenada de Arenas*, or Sandy Cove. The two points form the narrowest part of the channel between Minorca and the *Isla Ayre*.

AYRE ISLE.—This little isle, which lies at the distance of nearly a mile from the S.E. end of Minorca, is three-quarters of a mile in length. Its N.W. part is low and flat, but the S.E. is more elevated, and so steep-to that a vessel may almost venture to graze the rocks. In passing through the strait between this isle and Minorca, vessels of burthen should keep in mid-channel, where the greatest depth is about $6\frac{1}{2}$ fathoms, diminishing regularly to $2\frac{1}{2}$ at the distance of a cable from either shore.

FROM THE FREO OR STRAIT BETWEEN THE ISLE AYRE AND MINORCA there is no place of retreat that can be recommended to a stranger. The *Cala Delcausa*, which is about a mile and a half to the north-eastward of Point Algaret, is occasionally a place of retreat for small coasters, behind an islet in the entrance; but even there so strong is the swell of the sea, when it advances from the northward, that the strongest cables and anchors cannot long resist its violence. All winds from the N.E. or N.W. quarters cause a considerable swell, but the true North alone is the most dangerous on the coast; and from this wind shelter in the cove may be found. At about half a mile to the north-eastward

from Delcaufa Cove is *Point Prima*, whence a ledge of rocks extends to thrice the length of a long-boat. At nearly a mile to the northward of Point Prima is the *Punta del Isletes*, from which a reef extends to about half the length of a ship's launch. The whole of this coast, between the strait and Port Mahon, is so clean, with the exception of the Points Prima and Islets, that vessels of every class may advance as near to it as can be requisite. The tides, as already noticed, are irregular, rising or falling a foot or two, as the weather may be calm or rough.

SHOALS IN THE VICINITY OF MINORCA.

1. In the latitude of $39^{\circ} 23\frac{1}{2}'$, and about 13 leagues to the S.E. [S.E.] of Cape Mola, near Port Mahon, is a shoal, marked on some French Charts *Ouvre l'œil* (Look out). On examination it has proved to be a bank, 2 miles in extent, and having over it from 9 to 11 fathoms of water; but even with this depth, when the wind blows fresh, the sea appears rough and troubled.

2. Another shoal has been exhibited in the same charts, in lat. $40^{\circ} 18\frac{1}{2}'$, to the N.E. by E. $\frac{1}{2}$ E. [N. $41\frac{1}{2}^{\circ}$ E.] $12\frac{1}{2}$ leagues from Cape Mola. For this the mariners of Minorca have sought without success, and they do not believe that it exists, although it had been previously stated that two rocks had been seen above water, appearing like the hulls of small vessels, with the keel uppermost.

3. A shoal in latitude $40^{\circ} 28'$, on the meridian of Cape Minorca or Bayoli, is generally allowed to exist, but no description of it has been made known. Another, represented at 42 minutes more to the West, and 7 miles more to the North, is considered as wholly imaginary.

There is good reason for questioning the present existence of these shoals. They are omitted in Captain Smyth's chart, in which it is shown that, in latitude $39^{\circ} 12'$, at 12 leagues true South from the S.E. end of Minorca, no bottom could be found with a line of 520 fathoms. At nearly the same distance to the S.E., true, from the S.E. coast of Majorca, no bottom could be found at 400 fathoms.

IV. The COAST of FRANCE from CAPE SERVERA to the RIVER VAR.

CAPE SERVERA, as already shown, in page 40, is 9 miles N. by W. $\frac{1}{2}$ W. [N. 37° W.] from Cape Creux. To the northward of the cape, at about 500 fathoms from shore, there is said to be a sunken rock, having over it only 5 feet of water. At about a league and a half to the northward from Cape Servera is the entrance of the little inlet named PORT VENDRE, having a small town, situated at the foot of the mountains. Its situation is, lat. $42^{\circ} 32' 5''$, long. $3^{\circ} 5' 57''$ E. This place may be known by a great rock above water, at 30 or 40 fathoms from the south point of the entrance. On the starboard, or north side, is a small fort, in which is a square light-house, exhibiting a fixed light, at the height of 108 feet, and which may be seen nearly 4 leagues off.

Port Vendre is about 400 fathoms deep, and, in some places, 100 fathoms wide: its entrance is between the light-house point and the rock above mentioned, where there is a depth of 9 fathoms. The best anchorage is in 3 or 4 fathoms, off a stone redoubt on the larboard side. From this spot the water quickly shoalens. Good water may be obtained from behind a fortification, at the bottom of the port.

COLLIOURE.—Nearly a league to the north-westward of Port Vendre is the town of Collioure, which is situate on the sea-side, in a bay, at the foot of a rising ground, on which stands *Fort Mirdor*. In the bottom of the bay, to the westward, stands a castle on a point of rocks; and, to the S.W., at the bottom of a sandy creek, are several fishermen's houses, and an old tower in ruins, not far from which is a building, once a monastery. Farther inland may hence be seen the *Fort of St. Elme*, on a hill, which defends both Port Vendre and Collioure. Off the north point of Collioure is an islet, with a chapel on it, between which and the land is a passage for boats. Collioure is now frequented by small craft only, which ride safely with westerly winds, but quite exposed to East and N.E. winds, which produce a great sea.

At

At the distance of nearly 8 leagues N. by E. $\frac{1}{2}$ E. [North] from Collioure is CAPE LEUCATE, a point of moderate height, and level on the summit: upon it is a watch-tower and redoubt. The intermediate coast is low and sandy, and the land within is an extensive plain. On this plain may be seen the town of PERPIGNAN, which stands on the south bank of the *River Teta or Tet*, at the distance of 13 miles, to the north-westward, from Collioure. Between Collioure and Perpignan are the towns of *Elne* and *St. Nazeire*; and, at about 3 leagues to the northward of Perpignan, on an eminence, stands the *Castle of Salces*.

At the entrance of the River Teta or Tet, on its south bank, stands the *Tour de Canet*; and, at nearly 5 miles to the northward of this is the south end of the Pond or Lake of Leucate, which has several entrances between the islands that form it. Near the north end of this lake, within the cape of the same name, is the town of *Leucate*.

PORT of NARBONNE.—At about 2 leagues to the North [N. by W. $\frac{3}{4}$ W.] from Cape Leucate is the fixed harbour light of *La Nouvelle*, on the south side of the entrance into the Port of Narbonne. It stands on the jetty, and in entering is to be left on the larboard side. The light is elevated 36 feet, and may be seen 3 leagues off. Between this and Cape Leucate is the inlet called the *Grau de la Franque*, off which small vessels may anchor, in 5 or 6 fathoms of water, fine sandy bottom, at a mile and a half from shore; but this, like the other parts of the coast, is dangerous with easterly winds.

THE CITY of NARBONNE, the *Narbo Martius* of the Romans, and in modern times the see of an archbishop, &c., is situated on a river of the same name, at 10 miles to the northward from the entrance of the port. It was formerly a place of consequence, but is now neither rich nor commercial, nor populous in proportion to its extent; the inhabitants being estimated at not more than 15,000.

CAPE ST. PIERRE, the north point of what may be considered as the Bay of Narbonne, is about 14 miles N.E. by N. [N. by E. $\frac{1}{4}$ E.] from Cape Leucate. This is a large headland, stretching considerably to seaward. From this cape to that of Agde, the bearing and distance are E.N.E. $\frac{3}{4}$ E. [N.E. by E.] $5\frac{1}{2}$ leagues. The land between forms a large bight, broken by several inlets. The land of St. Pierre is of moderate height, and thence declines towards Agde. To the westward of Cape Agde is the town of that name, the harbour of which is nearly choked up with sand.

AGDE.—Upon the extremity of the eastern jetty, at the entrance to Agde, is a fixed harbour-light, elevated $29\frac{1}{2}$ feet, and which may be seen at 3 leagues off.

The fort of *Brescou* is about a league to the eastward of the River Agde: it stands on a flat rock, surrounded by the sea, at about 5 or 6 cables' length from the shore. Northward of this fort, at the foot of Mount Agde, is a heap of stones, about 150 fathoms in length, called the Mole of Agde; and close by it are some fishermen's houses. At about half-way between the mole-head and Fort Brescou is a sunken rock, of only 4 feet, and 20 feet close to it: there are, also, several rocks at a full cable's length without the fort. Vessels may anchor near the *Conque Rocks*, close to the mole, on the eastern side, in from 16 to 20 feet of water; but care must be taken not to approach too near Fort Brescou, even in a small vessel. To anchor on the western side of the fort, you should enter near mid-channel, between the fort and the low land on the larboard side, where the depth is about 15 feet. Near the fort, in the proper anchorage, the water is deeper.

CETTE, a small trading town at the entrance of the *Canal of Languedoc*, now called the *Royal Canal*, is the port-town of MONTPELLIER. This place may be known by a round mountain over the town, resembling that of Agde, and which, at a distance, appears like an island. The shore between Agde and Cette is low and sandy. On the top of Mount Cette is an old hermitage, with some ruins of fortifications. The town and port of Cette are on the eastern side of the mountain, and a mole extends out to the eastward, about 280 fathoms, on the end of which is a battery and a light-tower. This tower, on the Fort St. Louis, exhibits a *fixed light*, elevated 84 feet, and which may be seen at 4 leagues off. It stands on the left or western side of the entrance.

To the north-eastward of the mole is a long heap of stones, or jetty of rock, which serves as a breakwater, off the middle of the harbour, and forms two entrances thereto. To the northward of this jetty is the old mole, a similar heap of stones or rock extending from shore. The mole extends nearly true West from the lighthouse to the

entrance of the Royal Canal, which, at about 230 fathoms up, has a drawbridge over it.

To sail into the harbour of Cette, by the S.W. entrance, you should pass within half a ship's length of the mole-head, the deepest water being at about that distance from it. You may anchor within, alongside the mole, and moor with your prow to the eastward, having an anchor to the N.E., and a cable fast to the mole; or you may proceed to the bottom of the harbour, and lie in from 12 to 16 feet of water, on oaze and sand. The N.E. mouth of the entrance is shoal; but near the lighthouse or mole-head the depth is from 18 to 20 feet. At a short distance without the harbour is a shelf of sand, with only 3 fathoms over it, when the sea runs very high, with the winds from E.S.E. to S.W., which blow on this coast, and so obscures it with haze, that you cannot see the land until you are very near it. Good water may be obtained in the harbour.*

The town of Cette is situate on a long and narrow peninsula, or tongue of land, extending south-westward to within a league of Agde, there being an *Etang* (Pond or Lagoon) between it and the main land. The coast to the N.E., for nearly 8 leagues from Cette, is formed in a similar manner, but is broken into islands, and a great part is nearly level with the sea.

AIGUES-MORTES.—The town of AIGUES-MORTES (pronounced '*eg-mort*') is situated on the low land, upon the edge of a salt-pond, at 25 miles from Cette. There are several shoal banks hereabout, which render anchoring dangerous, especially with southerly winds.

On the mole of *Aigues-mortes*, N.W. from the *Grau du Roi*, at 558 feet from its extremity, and on the left side of the entrance, there is exhibited a *fixed* light, varied by *flashes every four minutes*. Its height is 60 feet, and it may be seen nearly 5 leagues off.

GULF OF LYON.—On crossing the GULF of LYON, from West to East, or towards Marseille, &c. with the wind to the southward, it is requisite to give a good offing to the northern shores, and to approach with great caution, because the *current, with southerly winds*, at times sets strongly to the North and N.W., and many vessels have been carried by it into the bight of Aigues-mortes, where they have been wrecked. Between the cape of Agde and Marseille, with the winds in the southern quarter, and it happens to be night or foggy weather, you must have frequent recourse to your lead: if, at the distance of 2 or 3 leagues from land, you find ground at between 30 and 40 fa-

* The following Notice was officially issued from the Chamber of Commerce, Marseille, 28d Nov. 1831.

"Navigators are to take notice, that, in order to facilitate the entrance of the Port of Cette by the north-east passage, the only one that should be attempted during the winter months, when the bad state of the weather prevents the local pilots from going out to vessels, that, in the month of October, a sea-mark was erected near the foot of the mountain, a little to the south of Fort Richelieu. The building is in the form of a quadrangular pyramid, the height of which is about 60 metres (197 feet) above the level of the sea.

"The eastern face of the building is painted white, with a black lozenge in the middle of it, for day signal; and two revolving lights, one over the other, have also been placed on it for night.

"This provisional light may be seen four leagues at sea; and the two lanterns, of which it is composed, may be distinguished from each other at the distance of a mile and a half from the port.

"In order to take the north-east passage during the day, it will be necessary to bring the light-house on Fort St. Louis on with the new building; and, by keeping them on with each other, they will lead in through the middle of the channel.

"It will be easy to do the same at night, by bringing the light of Fort St. Louis on with the two lights of the pyramid, now established as a provisional light.

"Navigators should, nevertheless, guard against the current, which sets strongly to the south-west, when the winds have blown long from the north-east; and it will be best for ships arriving from the north-eastward, instead of following exactly the above directions, to keep the new light a sail's breadth open to seaward of the light on Fort St. Louis.

"With the wind from the south-east, ships should keep the new light on with that of Fort St. Louis, taking care never to open them to the southward.

"Transmitted by M. the Director-General of Bridges, Roads, and Mines.

(Signed)

"M. ROUSSIER,
"Secretary to the Chamber of Commerce."
thoms,

thoms, tack immediately towards the S.W. or Pyrenean coast, for along that coast the stream runs southward along the land.

TIDES.—The French Pilot, '*Flambeau de la Mer**,' notices, as remarkable, that the tides make the tour of the whole Gulf of Lyon, setting to the north along the Coast of Provence, (*Department of the Rhone*), to the west, along the Coast of Languedoc, (*Herault*), and to the south, along the western or Pyrenean Coast; and when the wind is N.W. (*Maestro*), the tides run quite the reverse: for along the western coast they set to the North, to the East along the Coast of Languedoc, and to the South and S.S.E. along the Coast of Provence, or Mouths of the Rhone, &c. What renders the coast the more dangerous, is the extreme lowness of the land, which cannot be seen more than 3 or 4 leagues off; although, in clear weather, the steeples and towers of towns and villages, farther inland, may be seen at a greater distance: you may, however, sail at discretion along these coasts with winds off shore.

MOUTHS of the RHONE, &c.—The first town, from the sea, upon the Rhone, is ARLES, which stands on the eastern bank, at 8 leagues from the entrance. This was, formerly, a city of considerable importance, the country around it being fertile, and producing corn, wine, manna, oil, and fruits, but subject to inundations. Arles was a place of consequence when Cæsar warred against the Gauls, and there yet remain in it several monuments of high antiquity. The river has two entrances, divided by an island, *La Camargue*, which projects outward to the S.E. The S.W. entrance, which admits small vessels only, may be known by some huts on its western side, and a signal-mast or beacon, to point out the shifting of the banks, &c. On the western bank of this entrance, at 2 miles S.S.E. [*S.E. $\frac{1}{2}$ S.*] from the old tower of St. Genest, there is now a *fixed light*, 49 feet above the level of the sea, and which may be seen $3\frac{1}{2}$ leagues off. This light is very useful to the coasters bound to Marseille, the port of which bears hence E.S.E. [*E. $\frac{1}{2}$ S.*] distant 10 leagues.

The S.E. or principal entrance of the Rhone, is $2\frac{1}{2}$ leagues to the eastward of the western entrance, in latitude $43^{\circ} 20\frac{1}{2}'$, and long. $4^{\circ} 51\frac{1}{2}'$ E. It may be found by the tower of St. Louis, which stands on the north bank of the river, at about $3\frac{1}{2}$ miles from the entrance, and may be seen much sooner than the land about it. On the eastern side of the entrance are some fishermen's huts, which, also, serve as marks. By this channel tartans and other small vessels go up to Arles. The sands at the entrance often shift, and no stranger can enter without a pilot.

FOZ.—The entrance of the HAVEN of MARTIGUES lies 2 leagues E.N.E. $\frac{3}{4}$ E. [*N.E. by E.*] from the great mouth of the Rhone, and between is the Bay of Foz: all the coast between is low; but there are two little hillocks near the bottom of the bay, on each of which is a wind-mill. The town of Foz, in the N.E. corner, stands likewise on an eminence. The village of Bouc is nearly 3 miles to the southward of Foz; and between these places, on a plain, may be seen some antient aqueducts, opposite to which, in case of necessity, you may anchor.

In the Bay of Foz, generally, there are gradual soundings of 20 to 10, 5, and 4, fathoms; the ground of mud. From the Rhone, after heavy rains, the white water may be seen on that of the sea, setting south-eastward, to the distance of 5 miles from the mouth of the river.

BOUC.—The HARBOUR of Bouc, in the port of Martigue, is about 3 miles to the southward of Foz: all the land about it is low, and the harbour appears large, but it is very shallow, except in the middle, where the depth is from 4 to $2\frac{1}{2}$ fathoms, on mud and grass. The mouth is about 150 fathoms broad; on the south side is a fortress with a square tower, called the *Tower of Bouc*, which, being composed of white stone, may be seen a great way off. The north point of the entrance, called *La Languette*, is very low, and surrounded with rocks. At a little within the entrance, about 90 fathoms from La Languette, is a ledge of rocks, with 5 or 6 feet of water on them. It is called *Le Fou-*

* "LE PETIT FLAMBEAU DE LA MER," by le Sieur Bougard. Of so much of this work as relates to the Coast of France, a translation was published by Mr. T. Jefferys, about 1770, under the title of *Le Petit Neptune François*; a second edition in 1774; and a third, much improved, in 1805. Another translation, containing the whole work, was published by Mr. Serres, in 1801. To the latter is appended a series of coloured views, &c.; but the descriptions are very inaccurate, indeed frequently contemptible; and they by no means justify the professions in the title of the book.

card, and may be distinguished in rough weather, as then the sea always breaks over it. The best passage is to the southward of it; and, to sail in, run within a ship's length of the south point, and steer to the E.N.E. (by compass,) until you open the drawbridge of the castle to the eastward: then steer to the northward, with the village a little open on the larboard bow, and anchor with Languette Point bearing West. The S.W. wind, to which this place is much exposed, sometimes raises a great sea. Fresh water may be had at the town of Martigues, which is situate on the broken land, 2 miles to the eastward.

There is now a harbour-light on each side of the entrance of Bouc, each showing a fixed light. That on the mole-head, on the north side, is 26 feet in height, and may be seen 3 leagues off. That on the fort or castle, on the south side, is 98 feet in height, and may be seen at 3½ leagues.

Several banks, on the east of Bouc Harbour, form as many channels to Martigues; of these, the principal, through which the tartans pass, is the southernmost; on the end of it stands a house, by which it may be known. At the entrance of these channels are several weirs, (*Bordigues*), for catching fish.

CAPE COURONNE, which is nearly 5 miles S. by E. from the Tower of Bouc, is smooth and low. The *Rogas*, a ledge of rocks and sand, with 5 or 6 feet over it, lies at the distance of a mile S.S.W. from the cape; and between this and the land are two other shoals, with less water. From Cape Couronne the mouth of the Rhone bears N.W. by W. ¼ W. 8 miles.

BAY of MARSEILLE.—The great BAY or GULF of MARSEILLE is that which is formed between *Cape Couronne* and *Cape Croisette*. The latter bearing from the former S.E. ¼ S. [*S.E. by E. ½ E.*] 14½ miles. An approach to the Bay may be known by the distinction of its extreme points; Cape Croisette being of high land, and Cape Couronne low. On the top of the hill, half a league within Cape Croisette, is a semaphore. From the westward several high hills may also be seen; particularly, at from 10 to 13 leagues, a round mountain in the country, called the *Mountain of Aix*, the Mountains of *St. Baume*; and, to the eastward of Marseille, almost joining these, the Mountain of *St. Sery*, which appears like two sugar-loaves: besides these, you will soon see, to the southward of Cape Croisette, the *Isle de Riou*, which is of moderate height, and nearly 2 miles from the land.

PLANIER.—Without the line of the two capes, and with Cape Croisette bearing E. ¼ S. [*E. by N.*] 5 miles, is the *Isle of Planier*, almost level with the water, but having a lighthouse on it, which may be seen afar off. Excepting the east side, this isle is surrounded with rocks, which spit out especially to the S.E. and S.W. A shoal of rocks, called the *Veyrun*, having a depth of only 15 feet, lies S.E. ½ E. [*E.S.E. ¼ E.*] nearly a mile from Planier; but it is the only danger hereabout.

The Lighthouse on Planier exhibits a revolving light, and the eclipses succeed each other every half-minute. In ordinary weather those eclipses do not appear total until the distance is greater than 3 leagues. The elevation of the light is 131 feet, and it may be seen more than 7 leagues off.

At 4½ miles from Planier, N.E. ¾ E. [*N.E. by N.*] is the S.W. end of the isle *Pomègue*, which is a mile and a quarter in length, nearly in the same direction. To the northward and eastward of this are the fortified Isles *Ratoneau* and *Chateau d'If*, both of which are within 2 miles of the Port of Marseille.

On the north coast of the Bay, at about half a mile to the eastward of Cape Couronne, is *Point Riche*, which extends out near half a mile, and is of moderate height. On the western side of this headland is a sandy bay, where there is anchorage with off-shore winds. At two-thirds of a mile to the northward of the point is the village of Couronne. *L'Aragnon*, a large flat rock above water, lies a mile and a half to the eastward of Point Roche, at a short distance from the shore.

CAPE MEJAN, another headland on the north coast, lies 8 miles to the eastward of Cape Couronne; and to the eastward of Cape Mejan is *Lerevigne*, an islet close to the land, and steep-to in 7 fathoms. In the bottom of the Bay, on the north coast, at 3 miles from Cape Mejan, is a broad whitish point, named *Corbiers*, with a battery on it, on the eastern side of which is the anchoring-place of *Etasque*, in which the best berth is within 3 or 4 cables' length of the coast, and not more; for here you avoid some loose stones,

stones, which are injurious to cables. The proper depth is from 12 to 20 fathoms, on mud and weeds.

It is to be observed that, eastward of the line between the anchorage last noticed and the light-house of the harbour of Marseille, there is no good anchoring ground, all the bottom thence toward shore being full of rocks. In the middle of the bay the bottom is of oaze, and the depths from 30 to 40 fathoms.

PORT OF MARSEILLE.—The isle *Chateau d'If*, already noticed, lies about one mile and two-thirds W. by S. [*S.W. by W. ½ W.*] from the entrance of the harbour or port of Marseille. It is fortified on all sides, and has three towers. On the N.W. of this is *Ratoneau*, separated only by a narrow but deep channel. On the N.E. point of the latter is a battery, and off its west end is an islet or great rock, called *Tihoulen*. To the south of *Ratoneau* is the N.E. end of *Pomegue* or *St. Jean*, which has a round tower and some fortifications; and, upon the highest part of the island stands the tower of *St. Jean* or *St. John*. At *Point Pomegue*, which is to the southward of this tower, is a creek, formed by a little island almost contiguous, where vessels from the Levant sometimes perform quarantine: there are here from 3 to 6 fathoms of water, on muddy ground; but it is necessary to moor head and stern, with a good anchor to the eastward. There is anchorage in several places about *Ratoneau*, but the best is near the point of *Pomegue*, where the tower stands, and near also to a rock above water, which is opposite a sandy beach on *Ratoneau*, below the fort, where there are 3, 4, and 5, fathoms of water, on muddy bottom. Have a good anchor down to the S.E., and a good mooring towards *Ratoneau*, because the squalls from the N.W. come over the island with great violence. There is also a good anchorage between *Chateau d'If* and the eastern point of *Ratoneau*, against a creek of that island, in 3 or 4 fathoms of water, muddy ground.

Between *Chateau d'If* and the harbour of *Marseille*, and nearly in a direct line, are two rocks under water; the nearest to *Chateau d'If* is about 300 fathoms from it, has 3 feet of water on it, and is called *Sourdara*; the other is about 100 fathoms from it, in the same line, with one foot of water on it, and is called *Canouvier*: when you are directly upon the latter, the tower of *St. Jean* on *Pomegue* will appear between two towers of *Chateau d'If*; and, when you are over against it, the great Cape of Montredon will appear midway between the *Point of Daume* and the first island off it. The sea generally breaks over both these shoals; you may pass between them and *Chateau d'If* without danger, by keeping nearest the island, where there are from 9 to 12 fathoms, muddy bottom: you may also pass between the point of *Daume* and *Canouvier*, and range along the coast at discretion: this is the usual and best passage.

THE CITY OF MARSEILLE, the antient *Massilia*, is now the second city of France, and boasts a population of 116,000. Its inhabitants were formerly called *Massilienses*, now *Marseillois*. It is said to have existed 500 years before the birth of Christ, is seated at the foot of a rocky mountain, next the sea, and is divided into the Old and New Town. The former is situate on an eminence, and consists of narrow crooked streets, with mean houses, but in the latter the streets are straight and broad, and adorned with handsome edifices. It contains a large arsenal, and a large armoury. The harbour lies nearly true East and West, and forms a basin 525 fathoms in length by 150 in breadth, on the S.E. side of which are docks for the gallies. The entrance of the harbour is only 40 fathoms broad: it is defended, on the south side, by a strong citadel, and on the north side by a fort, that of *St. Jean*, wherein stands the lighthouse. It has not sufficient depth for men of war; these, therefore, must anchor on the outside. The city affords no prospect from the sea; but Fort *St. Jean*, with its high round tower, or light-house, will lead directly to it.*

The Observatory of *Marseille* stands in latitude $43^{\circ} 17' 49''$; longitude East from Paris, $3^{\circ} 2' 0''$; from Greenwich, $5^{\circ} 22' 15''$.

The citadel, which has four bastions, is called that of *St. Nicolas*: near this, a little farther back, on an eminence, is a fort called *Notre Dame de la Garde*. The harbour or port lies in the middle of the town, and is esteemed one of the safest and most convenient in the Mediterranean: it is covered by a large point, which defends it from the

* STEAM PACKETS, *Le Henri IV.* and *Le Sully*, now run regularly between Marseille and Naples, touching at Genoa, Leghorn, and Civita Vecchia. Sail on the 10th, 20th, and last days of every month, at 7, a. m. (1831.)

sea, and the harbour's mouth is between the two *citadels* above-mentioned, where stand three pillars, to which the chains are fastened; the entrance is towards fort *St. Jean*, between a high tower and one of the said pillars. In going in keep near mid-channel, by which means you will avoid rocks that lie near the lighthouse point; a leading mark is, the sentry-box in the middle of *St. Nicolas' citadel* in a line with the windmill beyond it; then, as you turn round the lighthouse to enter the harbour, keep a little nearer to the tower of *St. Jean* than to the pillars, on account of some stones which have fallen off: there are 15 or 16 feet in the entrance, but all over the harbour 15 and 20 feet, and on the outside 4 and 5 fathoms; in which depth ships may anchor if prevented getting in by an easterly wind, but it is not safe to remain there at night.

S.W. [nearly S.S.W.] of *Marseille*, about one mile, is the low point of *Daume*, off which are two islets, with a fort on the outermost: E.S.E. of these islets is anchorage in 6 to 8 fathoms of water, on mud and weeds, and you may fasten a cable to the *island*: farther out, your anchors will be apt to come home with S.E. winds. To the southward of *Point Daume* is *Veaune Road and River*: and further on is the foul shore of *Montredon*: off which, in case of necessity, you may anchor in 18 or 20 fathoms of water: but there is no shelter from sea-winds. From *Point Daume* to *Cape Croisette* is about 4 miles: at the point of *Cape Croisette*, which is low, is a high and steep island, called *De Maire*, near to which, at the N.W., is a smaller one, called *Tiboulen*: small vessels may pass between them in 7 or 8 fathoms, by keeping nearest to *Tiboulen*, in order to avoid a sunken rock near *De Maire*. At rather more than a mile from the *Ile de Maire* is that of *Jaire*, which is of moderate height, and about a cannon-shot distant from the coast: between which and *Jaire* are 7 fathoms of water; between *Jaire* and *Maire* are 20 fathoms. The *Ile de Riou* is about three-quarters of a mile S.S.E. from *Jaire*: it is a mile long from West to East, and generally steep-to; but a reef stretches from its western end, which has one small rock above water. On the summit is a watch-tower. To the northward of *Riou* is a smaller isle, *Calescraigne*, which is flat, and a shoal lies to the southward of it. To the south-eastward of *Calescraigne* are two rocks above water, *les Congloues*; at the west end of *Riou* is another, *la Mayade*; and on the S.E. side of the same are two others, called the *Emperors*. The variation, as found in the observatory of *Marseille*, 16th August, 1815, was $19^{\circ} 50' W.$, and it is nearly the same at the present time.

REMARKS and DIRECTIONS for MARSEILLE, by MR. WM. SMITH, R.N.

"The danger to be avoided, on sailing into *Marseille Bay*, is the *Veyrun*, a reef of rocks, with 15 feet of water upon them, lying one mile E.S.E. from *Planier Island*. This island is very low, and must not be approached within a mile on the S.W., South, and S.E. sides, because rocks stretch from it in these directions. A white tower stands upon it, on which a light (revolving) is exhibited by night, that may be seen at the distance of 3 or 4 leagues. The islands *Pomegue*, *Ratoneau*, *Chateau d'If*, &c. are all bold-to, and may be approached to the distance of a cable's length all round. There is a passage between *Chateau d'If* and *Point Daume*; but nearly in mid-channel are two rocks under water, the westernmost of which has about 3 feet on it, and on the easternmost the sea generally breaks: they lie with the Tower of *St. Jean*, on the Island of *Pomegue*, in a line with the tower on *Chateau d'If*, and may be avoided by keeping either close to *Chateau d'If* or to *Point Daume*. Between the latter and the rocks is the passage generally made use of, and there is in it from 10 to 6 fathoms of water.

"To anchor in the Bay, before the town of *Marseille*, bring the lighthouse or tower of *St. Jean*, which stands on the larboard side of the entrance into the harbour, to bear from S.S.E. to S.E. by S., and the Island *Chateau d'If* S.W. or S.W. by W. in from 18 to 15 fathoms of water, sand and mud. Moor with an open hause to the W.N.W., as N.W. winds, which are the most prevalent, and the strongest that blow here, send a very heavy sea into the bay. The best anchorage is said (by the pilots) to be in *Veaune Road*, where you may anchor in from 10 to 15 fathoms of water, quite sheltered from the N.W. winds, but open to the S.W. and W.: there is no tide, but a small rise and fall of water, occasioned by the winds. Wood may be purchased at the town, and water may be got at different places in the harbour, and also in *Veaune Road* from the river.

"Fresh beef and refreshments of all kinds may be obtained in great plenty, very good and cheap. The entrance of the harbour is defended by a strong fort on each side, having

having together about 70 embrazures facing the sea. There is also an old castle, called *Notre Dame de la Garde*, which stands upon a hill to the southward of the city.

"*Notre Dame de la Garde* commands the town, but at present it is in a very ruinous state. There are castles and fortifications upon the Islands Pomegue, Ratoneau, and Chateau d'If; the latter has been very strong, but, at present, it and all the others are in a very bad state of repair, and have very few guns mounted. Marseille has a great trade, imports a vast quantity of corn, exports manufactured goods, with the various productions of the country, and sends a number of ships to the West Indies."

CASSIS.—From CAPE CROISSETTE to CAPE L'AIGLE the distance is about 12 miles, and the land between is generally high, with burnt cliffs. At 4 miles to the north-westward of Cape L'Aigle is the little town and port of Cassis: behind the town is a small castle, and before it a road, in which the depths are from 4 to 6 fathoms. At a mile and a quarter to the S.W. of Cassis is *Port Miou*, in which several small vessels may anchor, and be sheltered from all winds; the entrance of this harbour is narrow, and difficult to find until you are near it, when you may see a white chapel, which stands on its eastern point. To the S. by W. $\frac{1}{4}$ W. [*S. $\frac{1}{4}$ E.*] 4 miles from Cassis, lies *la Cassidaigne*, a dangerous cluster of sunken rocks, having over them only 2 or 3 feet of water. From this reef the eastern end of the Isle Riou bears N.W. by W. [*W.N.W.* $\frac{1}{4}$ W.] $6\frac{1}{2}$ miles.

EASTWARD OF CAPE L'AIGLE, at the distance of 300 fathoms, is the *Isle Verte* or Green Island, which is rather more than 300 fathoms long, from West to East, and of moderate height. In the passage between this isle and the shore, and rather nearer to the isle than the cape, is a rocky shoal, of only 6 feet of water, which will be avoided by keeping over towards the cape, where there are 8 and 10 fathoms.

LA CIOTAT.—At three-quarters of a mile to the northward of Cape L'Aigle is the town of *Ciotat*, which surrounds the north and west sides of a small but snug harbour, in which the depths are from $3\frac{1}{2}$ to 2 fathoms. On the south side of the entrance is a mole, within which a few small vessels may lie sheltered from all winds. On the north point is a small fort, and about this point are some sunken rocks. Vessels going in should therefore run along by the head of the mole, in order to avoid the rocks. There is anchoring ground at about 3 cables' length to the S.S.E. of the mole, in from 4 to 7 fathoms, but it is not safe to lie there at night. You may also anchor farther up the Gulf of Ciotat, about a cannon-shot from a point, with two wind-mills on it, (*Little Cape St. Louis*), in from 6 to 8 fathoms of water, on sandy ground. The country about *Ciotat* is noted for its delicious fruit, oil, and excellent wine.

On the fort, on the east side of the entrance to La Ciotat, is a *harbour-light*, fixed, which may be seen at the distance of $3\frac{1}{2}$ leagues; its elevation being 82 feet above the level of the sea.

The GULF or BAY of CIOTAT is three miles broad, from *Cape L'Aigle* (Eagle Cape) on the west to *Cape Carboniere* on the east. It has soundings all over it, from 28 fathoms, decreasing to each shore, but the western side has the deepest water. At $3\frac{1}{2}$ miles to the south-eastward from Cape Carboniere is the castle and town of BANDOL: the castle stands upon a point of moderate height, and opposite to it is an islet, named *Rousse*, and a rock, *La Gritte*, more to the east. In the harbour formed by these there is anchorage, in from 7 to 3 fathoms.

CAPE LA CRIDE (*C. Negre* of the old charts) lies three-quarters of a mile S.S.E. from Rousse or Bandol Isle. In proceeding to Bandol give the rock, *la Gritte*, a good berth on the larboard hand, but take care not to advance too near Cape la Cride, as a reef stretches from it. When you are opposite a large house standing on the sea-side, near Bandol Castle, you may anchor in from 5 to 7 fathoms, on mud and weeds. Between the castle and isle there is a depth for boats only.

BRUSC ROAD.—This road or bay is formed by Cape la Cride on the north, and the *Isle des Embiez*, with other isles, on the south. The distance between is about two miles, and it is nearly the same in depth. The summit of Embiez is distinguished by a round tower, having some houses on the land beneath it. Westward of Embiez is an islet named *le Ravilon*, which is surrounded by rocks, both above and under water, demanding great caution in those who sail in for the road. The best anchoring place is to the northward of the Isle des Embiez, in 5 or 6 fathoms, opposite a sandy shore, on

which are some warehouses. The ground here is mud and grass, and holds so well that it is necessary to weigh the anchors frequently.

On the N.E. side of Brusc Road stands the village of Senary or St. Nazaire, on the western side of which is a small mole. The most troublesome winds in this bay are from the W.N.W. and N.W., but, as the ground is very good, they seldom produce mischief. Good water may be obtained at the bottom of the bay, or from the river at Senary.

CAPE SICIE, or LA VIEILLE GARDE, a bold and prominent headland, lies at the distance of one league to the south-eastward from the lower part of Brusc Road. The land between is high and bold; and upon it, at three-quarters of a mile N.W. from the extremity of the cape, is the chapel of *Notre Dame*. To the E.N.E. from the same point are two rocks above water, *les Freres*, or the *Brothers*: there is a passage between them and the coast, with 10 fathoms of water, but it is necessary to keep in the middle of it, there being a sunken rock near the point of the cape: there is another to the eastward of the *Brothers*, at the distance of about a cable and a half.

CAPE CEPET lies at the distance of 4 miles nearly East [*E.N.E.*] from Cape Sicie. This cape is the S.E. end of a peninsula, forming the south side of the Great or ¹/₂ Outer Road of Toulon. The land between it and Cape Sicie forms a bay, of which both extremities are very high; but in the bottom is a sandy beach, forming a cove called *St. Elme's Road*, where vessels may anchor, in case of necessity, with off-shore winds.

At about a cable's length from the southernmost point of Cape Cepet, is a rock, *le Rascas*, on which the sea generally breaks.

From Cape Cepet to the north point of the peninsula the distance is one mile and a quarter, and the coast is steep-to. At nearly a mile and a half westward from this north point is a small cove between two large points, called *St. George's hollow*; off which there is anchorage in from 8 to 15 fathoms of water, on muddy ground. Men of war and other large ships anchor farther off, to the northward, in the *Great Road*. Between the outer point and the point of *St. George's Hollow* there are several batteries, and a large infirmary, called the Hospital of St. Mandrier. At about three-quarters of a mile N.W. by N. [*N.W. $\frac{3}{4}$ W.*] from St. George's Point is a large round tower on the sea-side, fenced and fortified, called *Balaguier*; between is a bay, on the east side of which is a Lazaret or hospital; the land is very low near the sea-side, with sandy coves. In this bay (*Gulf of la Vechee*) ships perform quarantine. About one-third of a mile N. by W. from the tower of Balaguier, is the Tower or Fort of *Eguillette*: there is anchorage any where between these towers, in from 4 to 6 fathoms of water. At about three-quarters of a mile eastward of *Eguillette Fort* is another, standing on the opposite side, called *Grosse*, or the Great Tower, well fortified: between these is the entrance to the *Little Road*. *Grosse Tower* must not be approached nearer than a cable's length, because a flat, called the *Tasse*, stretches from it: there are also two other shoals lying off it, one of which, having 5 fathoms on it, bears nearly S.W. [*S.S.W.*] from the tower, distant about 400 fathoms; and the other, with $3\frac{1}{2}$ fathoms on it, bears from the same nearly N.W. by N. [*N.W. by W.*] about 350 fathoms.

TOULON.—At three-quarters of a mile to the northward of *Grosse Tower* are the Harbour and City of Toulon, celebrated for its arsenal and fortifications. In the arsenal every ship of war has its particular store-house, excepting for guns and cordage; and the general magazine, which supplies whatever may be wanting in the particular store-houses for single ships, contains an immense quantity of all kinds of stores, disposed in the best order. Its rope-house, built wholly of free-stone, is 320 toises in length, and has three arched walks, in which as many parties of rope-makers may work at the same time. The cannon-foundry is also worthy of notice. The harbour is formed of two basins, in front of the town, on the south, and communicate with each other. The depth, near each entrance, is 4 fathoms.

To sail into the *Little or Inner Road*, which is opposite the port, it is necessary to give the *Grosse Tower* a berth of at least a cable's length, in order to avoid the *Tasse*, and then steer directly for the middle of the city, and you will carry from 8 to 6 fathoms of water, the ground mud and grass; in any part of which you may anchor, until you draw near the entrance of the harbour, where it shoalens fast. Men of war generally lie in one or other of the harbours, which are shut up every night with a chain.

Nearly 2 miles south-westward from the city of Toulon, at the bottom of the bay called the

the *Little Road*, on the sea-side, stands the large village of *Seine*, off which you may anchor with middling ships; but you must keep in mid-channel, there being very little water near the shore; however, near the village there are from 3 to 5 fathoms, muddy bottom. The wind that you are exposed to in the *Little Road* is W.N.W., and in the *Great Road* to the E.N.E.; the N.W. wind is also very violent there.

REMARKS on SAILING up to TOULON, by MR. WM. SMITH, R.N.

To sail into the *Road of Toulon*, give the south point of Cape Cépet a berth of two cables' length, in order to avoid a rock lying off it, under water, on which the sea generally breaks. After passing the cape, you may steer up the Great or Outer Road at pleasure; and, with a beating wind, may stand from side to side, as close as you please, there being nothing to bring a ship up. To sail into the Inner Road, steer for Fort Eguillette until you bring the Two Brothers (near Cape Sicie) on, or a little open to the eastward of, the tower of Balaguier; thus you will avoid the *Tasse*, a shoal which stretches about W.N.W. from Grosse Tower, on the north side of the entrance. You may then steer for the centre of the city, and take up an anchorage in the Inner Road, in from 8 to 6 fathoms of water, soft muddy bottom, and good holding ground.

There is anchorage all over the OUTER or GREAT ROAD, in from 16 to 6 fathoms of water, mud and clay bottom, good holding ground: the best is on the south side, abreast of St. George's Cove, in from 14 to 6 fathoms. Moor with an open hawse to the eastward. The N.W. winds are the most prevailing, and strongest that blow here; but there can never be much sea from that quarter.

Wood may be purchased at the town tolerably cheap. Water is also to be got at the town. The French Admiral sent a tank alongside our ship, from which we completed our water.

Fresh beef, French wines, &c. to be obtained at a very reasonable price; the beef very good at from 5d. to 6d. per lb.

All the points in going into and round the roads, and also all the heights, are strongly fortified; but since the peace they have taken away many of the guns from about Cape Cépet, on which, in the war, I understood, they had upwards of 100 pieces of cannon mounted. At present (1818) they are making some alterations in the fortifications on the cape.

Toulon is a place of very little trade, excepting what is brought to the dock-yard, and a little corn, &c. imported, just sufficient for the consumption of its inhabitants.

We saluted the governor, the day after our arrival, with seventeen guns, which he returned with the same number. The admiral was remarkably civil to Captain Spencer, &c."

FROM TOULON EASTWARD.—At the distance of about $2\frac{1}{2}$ miles eastward from Grosse Tower is Cape Brun, on which stands a battery; and between are the Forts of St. Louis, Malgue, and Vignettes, which latter is a fortification nearly level with the water. From Cape Brun to Cape Garonne is about $2\frac{1}{2}$ miles, in a direction S.E. $\frac{1}{4}$ S. [S.E. by E. $\frac{1}{4}$ E.]; between them is the point and castle of St. Marguerite. From Cape Garonne to Cape Escampebariou, the bearing and distance are S.S.E. $\frac{1}{4}$ E. [S.E.] $4\frac{1}{2}$ miles: between the two latter is a large bay, with a very low sandy isthmus, having a great lake in the middle, over which may be seen the shipping at anchor in the Bay of Hyeres. Cape Escampebariou is the S.W. extremity of the Peninsula of Giens: it is large, and very steep to the southward, and has a house upon it resembling a castle, with a small tower near it: it appears like an island both from the eastward and westward, in consequence of the low sandy land to the northward of it.

The *Fornigues of Escampebariou*, a cluster of rocks above water, with some under water near them, lie at the distance of a mile and a quarter from the cape of the same name, and bear from it nearly N.W. by N. [N.W. by W.] There are 26 fathoms of water close to them, and they lie about a mile from the nearest shore, which is also rocky, and should not be approached nearer than a quarter of a mile.

The distance from CAPE ESCAMPEBARIOU to CAPE ESTEREL, which is the easternmost point of the peninsula of Giens, is $3\frac{1}{2}$ miles. Off the coast between lie the Ribaud Isles, of which the greater is less than half a mile in extent, in form of a quadrangle, and nearly half-way between the two capes. The Little Ribaud lies between this island and the main, from which it is divided by a channel, about 200 fathoms broad, having, in mid-

mid-channel, a depth of 3 or 4 fathoms, and through which small vessels frequently pass. Excepting for boats, there is no passage between Little Ribaud and the main.

BAY or ROAD of HYERES.—The Bay of Hyeres is formed by the land between *Cape Esterel* and *Cape Benat*, which bear from each other E. $\frac{1}{4}$ N. and W. $\frac{1}{4}$ S. [*E.N.E. and W.S.W.*] $9\frac{1}{2}$ miles. To the southward and S.E. lie the Islands of Hyeres, which are divided by several passes, and are celebrated for the great variety of medicinal plants which flourish upon them. The town of HYERES stands at the distance of 2 miles from the N.W. shore of the bay, and is noted as the place whence pilgrims for the Holy Land commonly took their departure. It is situate on the S.E. side of a hill, in a delightful country, enjoying a perpetual spring, and surrounded by beautiful gardens, containing the finest fruits in the kingdom; for oranges, citrons, and pomegranates, grow in the open air. At 3 miles to the eastward of the town are extensive salt-works, on the borders of a salt-lake. To the south of this is the Road, a very fine anchorage, having all over it fine clear ground, and regular soundings, in from 15 to 3 fathoms: there are several good landing-places in the bay, and ships frequently come here to load with salt.

Close to *Cape Esterel*, called also *Point Badine*, is a rock above water: this point is moderately high, and you may anchor within a cannon-shot to the northward of it, in 5 or 6 fathoms of water, on sandy ground, with S.S.W. and West winds; but with easterly winds you should anchor farther northward, off *Gapeau River*, where there is a *redoubt*, and a little farther N.E. a *magazine* or warehouse. Off this warehouse is the best anchorage, in 4 or 5 fathoms of water, mud and grass; and at *Gapeau River* you may get good water; but men of war generally anchor about 2 miles off the warehouse, in 10 to 12 fathoms of water.

From *Cape Esterel* to the eastern part of the salt-ponds, called *Point Argenticere*, the coast is low, sandy, and marshy. About $5\frac{1}{2}$ miles S.E. by E. [*E.S.E. $\frac{3}{4}$ E.*] from the magazine or warehouse above mentioned, is a little round island, with an old fort upon it, called *Bregançon*; to the north-westward of which small vessels may anchor, in case of necessity, in 3, 4, or 5, fathoms of water. The Bay of Hyeres is most exposed to the S.E. and S.W. winds, which cause a great sea, through the Great and Little Passes: and the N.W. winds are sometimes very violent there.

HYERES ISLANDS.—These are six in number; two of which, *Great* and *Little Ribaud*, have already been mentioned. The first next to these is *Porquerolles Island*, about 4 miles in length and one mile in breadth: its western end is about a mile and a third from *Great Ribaud I.*, forming the channel between them into *Hyeres Bay*, called the *Little Pass*, in which is from 8 to 18 fathoms of water. There are some rocks lying off the N.W. end of *Porquerolles*, which must be avoided: there is very good anchorage on its north side, opposite the castle, which is near the middle of the island. About 4 miles eastward from the east end of *Porquerolles* is the little *Island Bagueau*; the channel between these is called the *Great Pass*, and has no less than 20 fathoms of water in its shoalest part. *Bagueau* is nearly a mile in length from north to south, and close to its south end is the north-west point of *Porteros Island*, leaving a narrow passage called the *Little Pass of Bagueau*.

Porteros is about $2\frac{1}{2}$ miles in length, and $1\frac{1}{2}$ mile in breadth, and has a castle about the middle of its north side: off its south point is a small rock above water, called *La Gabiniere*, and at the N.E. end of this island is a small anchoring-place, called the *Port of Man*, protected by a fort of the same name, which stands on the east end of the island. The *Isle du Levant*, or *Titan*, is the easternmost, and is about half a mile from *Porteros*: it is $4\frac{1}{2}$ miles in length, and lies 5 miles to the south-eastward of *Cape Benat*, forming with it the eastern channel to the *Bay of Hyeres*, called *Passe de Levant*. To the eastward of the east point of *Titan*, about one mile, is a rock above water, called *L'Esquilade*; it has several sunken rocks near it, which must be carefully avoided.

DIRECTIONS for the ROADS of HYERES, by MR. WM. SMITH, R.N.

“To the Bay of Hyeres there are three channels or passes, all which are clear and safe. That between the island *Porquerolles*, on the south, and *Great Ribaud Island* and *Cape Esterel*, on the north, is called the *Little Pass*: it is about a mile wide, with from 24 to 7 fathoms of water in it. In sailing through this channel, give the S.W. point of *Porquerolles Island* a good berth, to avoid some rocks lying off it under water. With a leading

leading wind steer through in mid-channel; with a beating wind, you may stand pretty close to either side, excepting the above-mentioned point. The other channels are large and clear, and without any danger. All the projecting points of land are strongly fortified; notwithstanding this a fleet or squadron may enter the bay, with a leading wind, through the Grand Pass, out of gun-shot.

"There is good anchorage in most parts of the bay, and room to anchor a number of ships out of gun-shot: the best is allowed to be on the north side of the bay, in from 12 to 10 fathoms of water, soft muddy bottom, with the salt-houses bearing North, and the Isle Bregançon from East to E.S.E., but it is exposed to the E.S.E. and South winds, which send in a very heavy sea.

"Water may be had at Gapeau River, a little to the westward of the salt-houses. The entrance is defended by a small redoubt, standing on the east side of the river."

HYERES BAY to FREJUS.—From Cape Benat E. $\frac{1}{4}$ S. [E.N.E. $\frac{1}{4}$ E.] $4\frac{1}{4}$ leagues, is *Cape Taillat*. Cape Benat is very high and steep on all sides, and should not be approached nearer than a quarter of a mile, because some sunken rocks stretch off from it to a cable's length or more: there is, also, an islet near it, called *Cristau*. At E. by N. [N.E. by E. $\frac{1}{4}$ E.], one mile and two-thirds from Cape Benat, is a great rock above water, named *La Fournigue*, which resembles a boat: it may be approached, without risk, to the distance of half a cable. At about half a mile W.N.W. $\frac{1}{4}$ W. [West] from *La Fournigue* is a spot of foul rocky ground, of 9 fathoms, with 27 fathoms close to it, and called *Seche de Gourron*.

BORMES ROAD is 2 miles to the northward from Cape Benat, and has good ground in from 6 to 10 fathoms, off a sandy beach, between *Point Gourdon* on the south, and *Cape Narveau* on the north; but it is unsafe with winds from and between S.E. and East, because they blow full in, and cause a great sea.

Nearly $8\frac{1}{2}$ miles E. $\frac{1}{4}$ N. [N.E. by E. $\frac{1}{4}$ E.] from Cape Benat is Cape Cavalaire; and about half a mile farther on is a point of the same name, with a small round tower upon it, to the westward of which are some store-houses; but they cannot be seen until you enter *Cavalaire Road*, which is to the north-eastward of the point, where vessels may anchor in from 10 to 4 fathoms, sheltered from easterly and westerly winds, but quite open to the southward.

CAPE TAILLAT or **TAILLAR**, in latitude $43^{\circ} 8'$, long. $6^{\circ} 39' E.$, is $5\frac{1}{2}$ miles to the eastward from Point Cavalaire. This cape is the south-eastern extremity of a head-land from which the south-western end is nearly 2 miles distant, and a slender bay is thus formed between the two points. From the N.E. point of the Isle Titan to Cape Taillat, the course is E.N.E. [N.E. $\frac{1}{4}$ E.] and the distance 3 leagues; but a little to the eastward of this course, and about half way, is a sunken rock, which is very dangerous: therefore, in advancing from the eastward for Hyeres Bay, it is necessary to keep nearer to Cape Taillat than to the Isle Titan, until you get to the westward of Cavalaire, after which you may proceed for the anchorage at pleasure.

Cape Taillat is a long point stretching into the sea, of a moderate height, with *Camaret Tower*, a watch-tower, on it; close to the east side of it are some rocks above water. The cape at a distance appears like an island, it being connected to the high land of the main by a neck of low sandy land.

CAPE LARDIER, a large and steep point, lies at the distance of $3\frac{1}{2}$ miles N.E. $\frac{1}{4}$ E. [N.E. by N.] from Cape Taillat. At the point of the cape is a little oval islet, without which are two rocks above water, like boats, and to the eastward of the outermost rock, about three cables, is a very dangerous sunken rock, to which a good berth should be given on passing. From Cape Lardier the *Cape de la Moutte* bears nearly N.N.E. [N. $\frac{1}{4}$ E.] $3\frac{1}{2}$ miles. There is a slender bay between, that of *Pampalaune*, having a sandy shore, off which you may anchor in 5 or 6 fathoms, bottom of mud and sand; but it is quite open to, and unsafe with, easterly winds. From Cape de la Moutte to the Cape of St. Tropez the distance, in the same direction, is one mile and a quarter; the two points being, in fact, two projections of the same great head-land. At about three-quarters of a mile from shore between the two capes, is a large rock under water, called the *Moutte*, to the northward of which, at three-quarters of a mile, is a ledge of rocks, above and under water, stretching off from Cape St. Tropez, and which should not be approached nearer than to the depth of 8 fathoms.

GULF of GRIMAUD.—This Gulf is formed on the South by the land of St. Tropez: it is about 5 miles deep and one wide. So soon as you have advanced to the northward so far as to have the gulf open, you will see the small tower of St. Tropez on a low point, on the east of which is a little bay, *Canoubiez*, in which small vessels may anchor, in from 6 to 7 fathoms of water, on mud and grass or weeds: but as here the N.W. winds blow with great violence, this spot is very unsafe.

Small vessels may also anchor at a little to the westward of the town, near the middle of the gulf, in from 6 to 10 fathoms of water. In sailing into the gulf, take care to avoid a reef of rocks, which lie off the north point of the entrance, and extend nearly half-way across it; these are called the *Sardineaux*; they should always be left on the starboard side, and there is no other danger.

There is a small mole at the town of St. Tropez; and, at a little above the town, on a rising ground, is a fortress, with some wind-mills near it.

From Cape St. Tropez to the Cape and Tower of *Alexandre* the bearing and distance are N.N.E. [V. $\frac{1}{2}$ E.] 4 miles; and from Cape Alexandre to *Cape St. Egou*, on nearly the same bearing, the distance is 3 miles. Cape St. Egou is the western point of the GULF OF FREJUS, and the distance hence to the eastern point of the same is $2\frac{1}{2}$ miles. Two islets off the latter are called the Lion Isles.

FREJUS, an antient town, which, in the time of Cæsar, was called *Forum Julij*, stands at the distance of a mile from the northern shore of the gulf to which its name is imparted, and contains many monuments of its antient grandeur. On advancing to this place, you will see the town apparently near the middle of the bay, and, near it, to the south, a little river running into the sea. At half a league to the S.W. of the latter, is another small river, called that of *Argens*. Near the shore, at about a mile and three-quarters to the eastward of Frejus, stands the little village of *St. Raphael*; and between these places, at about a mile from the shore, is anchorage in from 10 to 7 fathoms.

At 3 miles eastward of the Lion Isles is the little *Isle of O*, close to the S.W. point of Agay Road; and nearly a mile to the north-eastward of the last is the west point, on which stands *Derimont Tower*: this point is high and steep, and, at a distance, appears reddish; but the east point of the entrance is low, and has the ruins of a tower on it: within the tower is a large house, with a small castle near it, on the sea-side. The usual place of anchorage is within the castle, on mud and weeds: fresh water may be obtained from a small rivulet at the bottom of the bay. The entrance is not half a mile across; and you must not approach the eastern point, whereon stand the ruins of a tower, nearer than a cable's length, as some rocks stretch from it, nearly to that distance. The wind to which vessels are exposed in this place is the S.S.E.; but the N.W. winds likewise blow with great violence.

At about one mile to the eastward of the entrance of Agay Road, is an islet, lying at about a musket-shot distance from shore: and close to the south side of this islet is a rock above water, called the *Vielle of Agay*: about 100 fathoms south from this rock is another, like a tun, called the *Boutte*; and, at 110 fathoms farther south, is a ledge of rocks, with only 5 feet of water on them, on which the sea generally breaks.

CAPE ROUX, a large mountain, steep on all sides, and covered with trees, lies two miles N.E. by E. $\frac{1}{2}$ E. [N.E. $\frac{1}{2}$ N.] from the Vielle of Agay. It has some reddish spots on it, whence it derives its name; and about it is a bed of rocks, extending considerably to the N.E. and North.

The ISLES of ST. HONORAT and ST. MARGUERITE lie at the distance of 5 miles to the north-eastward of Cape Roux, and between is the entrance of the bay called the GULF of NAPOULE, the western side of which is a considerable head-land extending to the eastward. Of the latter, the southern extremity is *Point L'Aiguillon*, and the northern *Point L'Aiguille*. The village of Napoule stands on the western side of the gulf, at a mile and a quarter N. by W. $\frac{1}{2}$ W. [N.W. by N.] from Point L'Aiguille; and there is good anchorage before it, near the land, in from 10 to 8 fathoms, where a vessel may lie well sheltered from winds from the S.W. to North, but quite exposed to all others. On the north side of Napoule is the little River Siage. On a cove, upon the N.E. side of the gulf, is the town of CANNES, whence the land trends to the south-eastward, nearly a mile and a half, and terminates in a low and narrow point, *Point la Croisette*, to the northward of the west end of St. Marguerite's Island. On the south point of Cannes, *Point Pierre*, stands a castle, and about it is a reef of rocks.

ISLES of ST. MARGUERITE, &c.—The Islands of St. Marguerite and St. Honorat are flat, and divided by a channel less than half a mile in breadth. On the south side of St. Honorat, the southern isle, near its middle, is a square tower, with some houses near it; and from the point on which this stands, a reef of rocks, called the *Monks (les Moines)* extends three-quarters of a mile to the southward. There is, also, at the eastern end of the same isle, another reef, called the *Picons*, and several rocks above water lie on the south side.

St. MARGUERITE has twice the magnitude of Honorat, and is higher on the north side. On the north side of this island is a citadel, (notorious in the history of France as a prison,) under the protection of which, to the eastward, small vessels frequently anchor, in from 9 to 7 fathoms of water, on muddy ground, where they lie sheltered from westerly and southerly winds. At about a cable's length from the east end of St. Marguerite is an islet, *La Tradeliere*, and a sunken rock, which must be carefully avoided.*

LE GOURJEAN or GULF of JOUAN.—This is a bay to the north-eastward of the island of St. Marguerite, the eastern point of which is the *Point l'Illette*, and the western Point *La Croisette*, already noticed. The distance between the two points of the main is $3\frac{1}{2}$ miles. In the bay, or gulf, there is anchorage in almost every part. This road may easily be found by those coming from the westward, by means of the isles of St. Honorat and Marguerite; and by those coming from the eastward, by the promontory named *Cape Garoupe*, the point of which is nearly a mile to the eastward of Point l'Illette. Near the middle of the entrance of La Gourjean, in the line of the two outer points, is a rock above water, appearing like a great boat, and called the *Boute of Gourjean*: both to the north and south of it are rocks nearly level with the water, on which the sea sometimes breaks. Excepting near these dangers, you may safely pass the Boute, in not less than 5 or 6 fathoms of water: in mid-channel, between it and Marguerite, the depth is not less than 28 fathoms; and this is the channel used by large ships. On the eastern side you may enter between the Boute and Point l'Illette; but here you may not go near the point, as the bottom is rocky to the distance of more than a cable's length; there are two sand spots of only 4 fathoms, between these and La Boute; so that it is necessary for large ships which sail in this way to pass near the eastern side of the latter. Having passed the Boute, on either side, you may go and anchor in the bottom of the bay, opposite a great square tower, that of the port, *Gabellas*, in 5 or 6 fathoms, on sand and mud. Large ships anchor farther off the tower, and nearer the Boute, in deeper water.

The most inconvenient winds in this road are those from the South and S.E. With the wind at N.W., you may anchor farther westward, near *Foucade Point*, in 5 or 6 fathoms, with a hawser on shore; and, with easterly winds, you may anchor under the N.E. shore, or Beach of *Pilon*, in 4 or 5 fathoms, bottom of mud and weeds, where, likewise, you may carry a hawser on shore. Good water may be procured near the tower of *Gabellas*, on the north shore, close by some houses standing there.

ANTIBES.—From the south point of Cape Garoupe to the town of ANTIBES, the distance North and South is 2 miles. On the summit of the high land between is a square tower and a chapel, dedicated to *Notre Dame (Our Lady) de Antibes*. A few rocks lie at different spots off the shore, which require caution. To the south of Antibes is a small bay, with some landing-places, called the *Cove of Vacon*. Almost in the bottom of the bay is a rock above water; and off Point Negre, the S.E. point, at the distance of 180 fathoms, is another rock above water: there is good anchorage between these rocks, in 4 and 5 fathoms, on a bottom of mud and weeds: it is safe with South and S.W. winds, but northerly and easterly winds blow directly in.

ANTIBES, the antient *Antipolis*, is the easternmost of the sea-ports of France on the Mediterranean Sea. It is well fortified, and its harbour, which is on the north of the town, is formed by a mole to the east. This mole is founded on a rocky point, having on it a half-moon battery, for the defence of the harbour. Upon the promontory, on the opposite side of the entrance, is a square fort, called *Fort Quarre*. The harbour was formerly much deeper than it is at present, two-thirds of it being now filled up with sand, and the other part, within the mole, admits small vessels only. The breadth of the

* The isles, now St. Marguerite and St. Honorat, were antiently called *Lerinus* and *Lero*. Hence they are also called to this day *Isles de Lerins*.

entrance between the mole-head and north shore is only 150 fathoms. The depths of water, within and near the mole, are from 15 to 18 feet. At about 100 fathoms N.E. [N.N.E.] from the point of the great bastion, which is on the middle of the mole, is a small ledge of rocks, with about one foot of water on them, and near them from 16 to 20 feet. You may pass between the mole and this ledge in from 20 to 25 feet of water, by keeping a little nearer to the half-moon battery than to the ledge: the safest way, however, is to pass to the eastward of the rock, and run in, at discretion, by the northern shore, on the height above which stands Fort Quarre: then steer for the port, and anchor in the bottom of the harbour along-side the mole, with your stern towards the town, where you may lie sheltered from all winds, and from the sea, although the E.N.E. wind blows full at the entrance. The N.W. wind is the only one which disturbs a vessel here, although it comes over the land, and precautions against it should be taken. It is difficult to run into this port with fresh easterly or S.E. winds, because the sea runs very high and hollow. Good water may be procured above the town, in a meadow, where there is a spring.

FROM ANTIBES the coast trends to the N.E. 2 leagues, to the mouth of the River Var, which river separates France from Savoy. The coast between is a low sandy beach, off which, at a short distance, the depths are 5 and 6 fathoms, but it is entirely exposed to the Levanters or easterly winds.

V. THE COASTS OF NICE AND GENOA, FROM *the* RIVER VAR to LA SPECIA and SARZANA.

We now arrive at those coasts which, by the last treaties of peace, have been assigned to the government of the King of Sardinia, and which include the once republic, but now grand duchy, of Genoa.

NICE and VILLA FRANCA.—The first port to the eastward of the Var is that of NICE, (antient *Nicæa*) from which it is distant only 4 miles. At a mile more to the east is VILLA FRANCA, having a superior harbour, under shelter of a head-land, which is distinguished by a lighthouse. From Cape Garoupe, to the southward of Antibes, the bearing and distance to *Cape Meaux*, the western point of Villa Franca, are N.E. by E. $\frac{3}{4}$ E. [N.E.] 4 leagues. On advancing, the town of Nice, seated on a plain by the sea-side, will be seen, as well as the lighthouse of Villa Franca, on an elevated situation, more to the east. A citadel, on a large point, protects all the south side of the town; and to the east of this is the harbour, of which the entrance is to the S.E., and has, between the piers, 12 feet of water. There is no anchorage without. When a vessel approaches the harbour, and hoists her colours, the harbour-master, if requisite, orders a boat, manned from every vessel in port, to assist in towing, &c.; and, when a vessel is ready for sea, she is assisted in like manner.

DESCRIPTION.—We shall here digress a little from our general plan, in order to admit some description of Nice and the country adjacent, which may apply, more or less, to a considerable extent of the coast eastward.

The city of Nice, lately the capital of the department of the Maritime Alps, is once more that of the County of Nice, to which its name was originally imparted. It is situate on the banks of the River Paglion, close to the foot of *Mont-Alban*, in a climate remarkable for its mildness and salubrity. The mountains which overhang Nice to the east also defend Villa Franca. A part of the town faces the south, but the greater part is to the north, and it is barricaded on the east by rocks, which have several times proved a powerful mean of protection against attacks from seaward. In its present state the town does not exceed, in any direction, one mile in extent. The suburbs and the town are divided by the Paglion, but are connected by a bridge of stone. When swelled with rain, the river rushes impetuously into the sea; but in the summer months the waters are so low that the inhabitants pass and re-pass on a bridge of planks, which they construct in order to avoid the circuit required for passing over the stone bridge.

Like several other towns on these coasts, Nice was noted for its antient splendour, of which there now remains a few relics only. The town has two fine squares: its S.W. quarter,

quarter, which is modern, is the handsomest. The public walk is in this neighbourhood, and is a delightful resource in the summer, when the sun is above the horizon. In the eastern part of the town are the university, hospital, and botanic garden; but the streets here are narrow and dirty, and foul air circulates around. The shops are well stored, but small, dark, and filthy.

The port is situated where there were formerly fine gardens. The mole is unhand-some, and often requires repair, on account of the violence of the surf, which disturbs the stone-work. The entrance is so small, that vessels of great burthen cannot enter; but small coasting vessels, feluccas, and open boats, are commonly to be seen here. On the side of the harbour are several good warehouses for the reception of merchandise. A handsome terrace supports and consolidates the banks, which oppose the inroads of the sea, and forms a delightful walk for the inhabitants, who have here an extensive view of the sea. Dr. I. B. Davis, to whom we are indebted for these notes, says, The terrace often exhibits a concourse of the *beau-monde* of Nice. The English families seldom reside in this quarter, though there are very few parts either of the town or suburbs where they could be more comfortably situated. It is seldom that the invalid cannot exercise himself on the terrace; and, if the day be fine, the beauty of the surrounding prospect must infuse new hilarity and life into his veins. The public walk is close to the sea, and extends from the port to the extremity of the ramparts, forming a very considerable circuit. It is generally well frequented at five or six in the evening. The inhabitants, who, for the most part, amuse themselves on the terrace or the walk, for two or three hours, go from thence to the theatre, and there conclude the amusement of the evening.

The *Nissards*, or people of Nice [*Nizza*], are represented as, in general, mild, humane, peaceable, complaisant, and gay. The inhabitants of the country, though poor, are civil, and perfect strangers to the vices engendered by luxury, and to the violent passions which agitate the great. Poor, frugal, and industrious, they are commonly occupied in providing for the subsistence of their families, in cultivating their fields, or watching their flocks. The country has always a smiling aspect, notwithstanding the cold which ever reigns upon the Alps: the human frame, and the productions of the earth, equally feel and evince it. The animal economy, like the vegetable, flourishes, and feels a joyous existence, when winter locks up the treasures of the earth, and spreads its gloomy mantle over other parts of the globe. The snow which falls at Nice is always small in quantity, and seldom or never remains more than twelve or twenty-four hours upon the earth. As Nice is open to the south, winds from that quarter are sensibly felt there. Its vicinity to the sea, and exposure to such winds, are the reasons that, in the summer months, the air which surrounds it is fresh and moist; for, as evaporation from the sea is constantly going on, the air which passes over an immense tract of water, like the Mediterranean, must be necessarily loaded to such a degree with aqueous particles, that the atmosphere, even to some extent from the coast, will be impregnated with them.

It is no unusual circumstance, in this part of the world, to have a clear sky for five or six months after March or April. The same fine season, however, does not reign in every part of the country at the same time. No rain fell at Nice, in the year 1803, from March to July. To compensate for this, gentle dews covered the earth, and vapours arose from the sea, which refreshed nature with their genial stores. A traveller has said that the sun was so hot at Christmas, in 1803, that he was frequently obliged to repose under the shade of the lemon-trees, where the verdant turf, enamelled with a vast number of small flowers, resembling the violet, flourished in all its beauty.*

The most important vegetable productions of the country are the olive, lemon, and orange, trees. The first, in point of beauty, surpasses all. The lemon is curious; while some of its branches are in full blossom, the rest are covered with lemons of all sizes, from the moment of their formation to maturity. Of the orange, as of the lemon, there are several species. The laurel-rose, the palm, the vine, equally decorate the country. The commerce has latterly been trifling: its exports consist of the chief productions of the country, such as oil, oranges, lemons, essences, &c. The imports are clothes,

* Although the climate of Nice has been recommended as one of the best for pulmonary complaints, experience has proved the contrary; for here, it has been noticed that, beautiful as the country is, a fervid sun and an uncommonly sharp wind, in the winter season, perpetually combat with each other. See, upon this subject, the description of Pisa, hereafter.—Ed.

linen, hosiery, cutlery, spices, sugar, coffee, &c., with salt from the country westward. The beef of Nice is indifferent. The aromatic plants, however, with which the country abounds, render the mutton and game excellent. There are several manufactories of soap, paper, and leather, in the town. Liqueurs, wax and tallow candles, and perfumeries of all kinds, abound. There is a rope-manufactory, and one of saltpetre.

"Nothing can be more beautifully picturesque than the position of Nice, as viewed from Mont-Alban, and all the adjacent hills. From hence is seen a country glowing with the richest cultivation, the most fertile soil, and the choicest beauties of nature. This scene, contrasted with the barrenness of some neighbouring hills, is beheld with greater ecstasy, and the difference is more strikingly perceptible. We must not, however, comprehend in this description the other side of the mountains, as the beauties of the country are here indisputably concentrated. The irregularity of seasons, so detrimental to vegetation in other parts of the world, is here exchanged for a progress so uniform and imperceptible, that the tenderest plant delights to feel the change, and acquires new vigour by it. Every day brings forth another flower, every month its fruits, and every year a copious harvest. The light tinges of the spring yield to the brighter hues of summer, and autumn boasts, in darker state, of the deep crimson and the orange. Unexposed to the bleak influence of the North, the pendent grape soon comes to full maturity; the almond and the peach already tempt the taste; the citron and the orange promise an ample recompense for the husbandman's toil. The luxuriance of the valleys must make that man's heart rejoice who regards and admires the rich productions of the earth. The sterility of some mountains gives him an idea of the mourning of nature, which, at the same time that it offers the most striking contrast between rural magnificence and rural degradation, impresses the mind with the strongest sense of the transient pleasures of the world, and of the insufficiency of present enjoyment. It equally awakens melancholy reflections on the future. Whose soul is not stricken with solemn admiration at the majestic mounds that encircle the spectator's eye, the barren wild of some of the contiguous mountains, the high cultivation he gazes on, the fertile valley, shady wood, and murmuring stream?

"The mind of man recoils upon itself, and sinks into awful contemplation at the wise and wonderful dispensations of Providence!"

VILLA-FRANCA.—From Nice to Villa-Franca, or Ville-Franche, as the road by land is bad, the passage is commonly by water, and is made in half an hour. In the way thither the eye is fatigued with the continued glare of rocks, bleached and worn by the waves. The harbour is spacious, deep, and has safe anchorage, but it is exposed to southerly winds. To the west it is sheltered by Mont-Alban, to the north by very high mountains, and to the east by a neck of land, covered with beautiful olive, and every kind of fruit-trees. The light-house at the entrance, already noticed, is defended by several formidable batteries. The town is built in form of an amphitheatre, at the bottom of the harbour, and contains from 2000 to 3000 inhabitants; probably not more than 2000, as it is a small decayed place. The bay is about a mile in depth, and, at the narrowest part, about one-third of a mile over. It may be readily known, on approaching from the westward, by the small square fort of Mont-Alban, which appears above the tower on the western point, and has a wind-mill near it. On advancing from the eastward, you will see the small fort of St. Ospicio, and the light-house on *Mala-Lingua Point*, which stretches far into the sea, and in the middle is very high.

Between the two points of the entrance to the harbour, the depths are from 35 to 40 fathoms, and the course is N.E. by N. nearly. [N. by E.] The usual place for anchoring is before the town, to the south-eastward of it, in from 18 to 15 fathoms. Without the castle is an hospital, and between them a small mole in the form of an L, called the *Darce*, in which there is 16 feet of water: this is on the western side. The way to moor off the town is with a good scope of cable to the southward, and a hawser on shore, secured to one of the marble pillars, which are erected for that purpose. The wind you are most exposed to is the South and S.S.W.; and, when it blows fresh at S.W. there is a great swell. Large vessels sometimes anchor off the mole-head, and moor athwart, with a cable each way; but they are more exposed than those which lie before the town. Good water may be had at the town, and at a convent above it.

Fort St. Ospicio is about two-thirds of a mile to the eastward from *Mala-Lingua Point*: it stands on a point of rocks, which is steep on all sides. At nearly a mile to the northward, from this fort, is a small point; and on this stands the *Tower of Bosc*, and a little

little chapel. The coast between Bosc Tower and St. Ospicio forms a slender bay, in which vessels may anchor with westerly winds, in from 12 to 8 fathoms; but be sure to give Cape St. Ospicio a good berth, in order to avoid some rocks which lie off it to the distance of a cable's length.

REMARKS ON VILLA-FRANCA, &c. BY MR. WM. SMITH, R.N.

VILLA-FRANCA.—There is no danger in standing into this bay, as the shore is steep-to on both sides, excepting one sunken rock, which lies about half a cable's length to the westward of Point Mala, on which the light-house stands. When you are within the small towers, which stand on each side of the entrance, you will find from 40 to 10 fathoms of water. The land around the bay is high and steep-to. During our stay we had no opportunity of determining the tides, but were informed that they never rise more than two or three feet, and never run strong. This place is easily known, by the cities of Monaco and Nice, it lying nearly between the two; the light-house is also good, standing near the sea, on a point lower than the adjacent land. The best anchorage is on the west side of the harbour, near the town, and the farther you are to the northward the better; the ground and the under-tow is strong with a southerly wind, which blows directly in, and causes a great swell; but there is scarcely any strain on the cable. The bottom is of fine clay, and in the anchorage above mentioned the depths are 8 and 10 fathoms.

The land about Villa-Franca may be readily known from the eastward, it having a remarkable white way, or mark, in the mountain, which appears, when you are a great distance off the land, like a road; but it is, in my opinion, occasioned by the heavy rains from the mountains: this lies between Villa-Franca and Monaco, and is a good mark for finding either. The light-house of Villa-Franca is a high white building; the land at the back of it is high, which makes it difficult to be distinguished, at any great distance. It appears like a sail when first seen. The land over Monaco is made very remarkable by a high table mountain, and another, to the eastward of it, like a sugar-loaf.

Wood may be had here by purchasing; and water, in great plenty, at Nice, which is only 3 miles to the westward, where it may be filled in the boat. Water is also to be had here, at the Naval Arsenal; provisions too may be had here, and refreshments of all sorts, in great plenty, with very good wine. On the west side of the harbour, between the arsenal and the town, stands a very strong fort; and on a point which projects from the north point of the harbour is another small fort. The best landing is at the town; but, in fine weather, there is landing in any part of the bay. Very little trade is carried on here, the City of Nice being so near it, where there is an excellent mole, and thence silks, oil, wine, &c. &c. are exported. Their Royal ships of war lie at the arsenal; and it is customary to salute here, as an equal number of guns are returned, and every mark of respect and attention is shown to his Britannic Majesty's ships and officers."

*The following Description of NICE and VILLA-FRANCA is from the pen of our respected friend Lieut. JOHN EVANS (a), R.N.**

"Nice is of great antiquity, having originally been built by the Grecian colony that settled at Marseille, 340 years before the Christian era, as a barrier to the eruptions of the Ligurians, with whom they were engaged in perpetual wars. The body of the town lies between the *Paglion torrent*, on the west, and the N.W. side of an insulated rocky hill named the *Chateau Rock*, from its formerly having had a very strong castle upon its summit, the massive fragments of which still remain. The bay of Nice extends from the point of the Var to the light-house of Villa-Franca, on the extremity of the peninsula of *St. Hospice [Ospicio]*. These bear from each other nearly E.S.E. and W.N.W. (by compass) about 5 miles. The water is deep throughout this bay, and it is unfit for vessels to anchor in. The port, which lies on the eastern side of the town, is small but snug, being sided by high land: it was constructed by art, in the year 1749; (the year after the peace of Aix la Chapelle;) but it is altogether too confined for large vessels, that is to say, those above 250 or 300 tons. Vessels of large size resort to Villa-Franca, a mile to the eastward. The land-carriage, however, between the two places, is rendered

* Author of the volume intitled "*A Revision and Explanation of Terms, Geographic and Hydro-graphic,*" &c. &c. See note in our Memoir on the Atlantic Ocean, page 295.

very difficult by the high and rocky nature of the land; a new road obviates this, in great measure, but still the transport on the backs of mules is tedious.

"*Nice is the entrepôt*, not only to the county of the same name, but to a great part of *Piedmont*; and, being a free port, offers great advantages to commerce, of which, however, our countrymen appear to be ignorant. During my stay of six months there, I saw only one English ship arrive; she brought a cargo of corn in bulk, from the *Levant*, and was to go to *Leghorn* for a home-freight. She was a vessel of 600 tons.

"The British Consul's house is situated abreast of the entrance of the port. The principal exports are olive oil; (which is considered next in point of good quality to that of *Florence*, and no doubt often sold as such;) wine, red *ordinaire*, in great quantity, not so good as that of *Provence*; *muscat* or muscadell, white, very good as a sweet wine; *belet*, red, celebrated for its fine flavour, made from the grapes of the *Vale of Magdalena*; not, however, in great quantity: fruit, lemons and oranges. The chief imports are grain and pulse; some portion of which is again shipped, and sent to *Marseille*, *Toulon*, &c. A principal merchant and banker here purchased in the short space of four months £45,000 worth of wheat, and resold it again, at a great profit, in a short time. From *France* fruits, tiles, earthenware, brandy, and choice wines, are received. I am of opinion that a choice collection of British goods, in small quantities, would meet a ready sale at *Nice*. Ironmongery, earthenware, printed calicoes, muslins, and woollen cloths, would, perhaps, be the best articles. I understand that freights are most generally to be procured at *Leghorn* or *Marseille*. [*This was written in 1818.*]

"French is the language of commerce, and of intercourse among the upper classes, and many speak Italian; but the general language is a *Patois*, probably the dialect of *Provence*.

"The climate of *Nice* is one of the finest in the world; very little cold is felt; in October the *Levant* wind* brought a rawness with it, but it soon gave place to the mild southerly breeze. In September there were heavy rains, and much lightning in the offing.

"The surf is very heavy after rains, upon the beach of *Nice*, a circumstance which is very singular, a heavy gale from the south, blowing directly upon the shore, did not produce nearly so heavy a surf as always takes place after rains; indeed it begins long before the torrent-waters rush into the sea.

"*Nice* may be known by the high mountain called *Mont Falicon* or the *Bald Mountain*, bearing N. by E. from the west end of the town, and the snow-capped mountains of the *Maritime Alps* which appear immediately over the singularly situated town of *New Castle* and *St. Helen's* church.

"**VILLA-FRANCA.**—The town of *Villa-Franca* is situated at the bottom of a very fine harbour; it is a small confined place, very wet and dirty. The little peninsula of *St. Hospice* forms the southern boundary of the harbour; it is hilly and planted with the olive. The mountains on the east and north sides rise precipitously, and are very high: the wind, when repelled from them, often rushes down with great strength upon the harbour; the water is deep, and ships lie close in abreast of the town. On the N.W. side there is a small mole, and two forts commanding the anchorage; and there is, also, a fortification on the shore of *St. Hospice*, besides the lighthouse at the extremity of the peninsula."

MONACO.—The fortified town of *MONACO* stands at the distance of 5 miles E. $\frac{1}{2}$ S. [*E. by N. $\frac{1}{2}$ N.*] from *Cape Mala-Lingua* and the lighthouse of *Villa-Franca*, and the land about appears as beneath, when seen from near the entrance of the Bay of *Villa-Franca*.



Lighthouse of Villa Franca.

A. Entrance of Monaco.

* How general, over the globe, is the deleterious quality of the East wind: what does this proceed from? "Shall it not utterly wither when the *East wind* toucheth it?" *Ezekiel* xvii. 10.

The town of **MONACO**, which is fortified, is seated on a rocky head-land, trending nearly East and West, steep on all sides, and nearly inaccessible: it being constantly washed by mountainous waves. The roadstead, or harbour, is to the northward, or behind the point; and here small vessels may anchor, having their larboard anchor out to the N.E., and two fasts on the shore towards the town, with a very good one from the stern to the N.W. In this place are from 3 to 4 fathoms of water, the ground mud and weeds. In the bottom, towards the landing-place, are 5 and 6 fathoms, but this part is much exposed to East and S.E. winds.

The shore should not be approached, in any part, nearer than to a cable's length, because there are several rocks under water. In the entrance are from 10 to 16 fathoms. The N.W. winds blow with great violence here; and, with easterly winds, you cannot land without great difficulty. In the bottom, where the landing-place is, you will see the walls of a large garden, in which there is a well, where you may have water: there is also a watering-place at about a mile to the N.E. of the town, at a rivulet, which turns some mills; and beyond the rivulet, at the top of a mountain to the eastward, you may see the village of *Rocca-bruna*.

Monaco is small, and the streets narrow: it has a garrison, and at its western end an old castle and a magnificent palace. The inhabitants, in small barks, export oil, lemons, &c. to Nice and Marseille.

CAPE St. MARTIN, &c.—At about one mile E. by N. [*N.E. by E.*] from Monaco, is a promontory, of moderate height, called *Cape St. Martin*; and, at 3 miles farther, E.N.E., is the small town of **MENTON**, which faces the sea. Between Cape St. Martin and this town is an irregular sandy shore, off which vessels may anchor with off-shore winds. The coast may be known by a high mountain, the summit of which, resembling a platform, and called the *Table of Monaco*, stands about a league and a half to the north-eastward of the town of that name. Another hill above it, a little to the eastward of the town of Menton, in the form of a sugar-loaf, and sharp on the top, is called the *Needle of Menton*. These are good marks, as both may be seen a long way off.

FROM CAPE ST. MARTIN to different points EASTWARD, the BEARINGS and DISTANCES are as follow:—

	Magnetic.	True.	
The Entrance of the Gulf of Spezia.....	E. by S.	E. $\frac{3}{4}$ N.	105 miles.
Viareggio, on the Coast of Tuscany.....	E.S.E. $\frac{1}{2}$ E.	E. $\frac{1}{2}$ N.	118 —
Entrance of the River Arno.....	E.S.E. $\frac{1}{4}$ E.	E. southerly.	119 —
The Melora Tower, off Leghorn.....	S.E. by E. $\frac{1}{2}$ E.	E. $\frac{1}{2}$ S.	117 —
The Isle Gorgona.....	S.E. by E. $\frac{1}{4}$ E.	E. by S.	104 —
The North end of Capraia.....	S.E. $\frac{1}{4}$ E.	E.S.E.	107 —
The N.W. point of Cape Corso, Corsica.	S.E. $\frac{1}{4}$ S.	S.E. by E. $\frac{1}{4}$ E.	90 —

Latitude of Cape St. Martin, $43^{\circ} 43' 30''$, Longitude, $7^{\circ} 52' 20''$ E.

VINTIMIGLIA.—By the sea-side, at the distance of $2\frac{1}{2}$ leagues E. by S. [*E. $\frac{3}{4}$ N.*] from Cape St. Martin, stands the town of Vintimiglia, at the base of a tract of elevated land. Above the town, on the west, stands a considerable fortress; and, on the east, is the mouth of the *River Roya*, upon the opposite bank of which is a little village on a plain. The river is shoal, and has a bridge over it, from the western side of the town. Small vessels may anchor before Vintimiglia, in fair weather, with off-shore winds, in from 13 to 10 fathoms of water, but the ground is bad, and there is no shelter whatever from the sea.

BORDIGHERA.—At about $3\frac{1}{2}$ miles East [*E.N.E.*] from Vintimiglia is BORDIGHERA, a small town, situated on a point of the same name, of a moderate height: it is encompassed with walls, and, at a distance, appears like a fortress: near the sea-side, to the westward, are a watch-tower and some fishermen's huts; and, off the point, are some rocks above water, but they are very near the shore.

ST. REMO.—At about $2\frac{1}{2}$ miles to the E. by N. of Bordighera Point is *Cape Nero*, the western point of *St. Remo*. This is a large point, almost round, with a square watch-tower upon it, and a small house adjoining: at about $3\frac{1}{4}$ miles to the eastward of this point, is *Cape dell'Armi*, or the eastern point of St. Remo, which is much like the former, and having likewise a square tower. Between these two points, almost in the middle of the bay, stands the small and pleasant town of St. Remo, on a little rising ground

ground by the sea-side, and having some gardens, with orange, lemon, and palm, trees near it. Within a small mole, which lies before the town, are from 6 to 8 feet of water. Large vessels may anchor off the town, at the distance of a mile, in 7 or 8 fathoms, on mud and sand: but they generally anchor farther out, in order to be in readiness to get under sail, there being no shelter from the sea-winds.

The neighbourhood of St. Remo is noted for its lemons, pomegranates, and other fine fruits; particularly vast quantities of olives, which yield excellent oil.

PORTO MAURIZIO.—At 3 miles N.E. by E. from Cape dell'Armi is a point of land with a tower, (*Terzolo*), near to which is the village of *S. Stefano* or *St. Stephen*. Between these points the land forms a hollow, into which falls the *River Taggia*, and here is a little fort and point, with some houses, &c. At the mouth of a small river, a mile to the N.E. of *Terzolo*, is the village of *St. Lorenzo*. At $2\frac{1}{2}$ miles from *St. Lorenzo*, to the E.N.E., is **PORTO MAURIZIO** or **PORT MAURICE**, a small fortified town, standing on a rising ground by the sea-side, and having a convent and some houses near it, to the eastward. Off the port there is anchorage in 15 fathoms, but entirely open to the sea, except from the north.

ONEGLIA.—At one mile to the N.E. of Port Maurice is the town of **ONEGLIA**, and at a mile and three-quarters *true East* from the latter is *Capo Verde*, otherwise called *Cape Oneglia*, a large round point, with a round watch-tower on it. The town stands in a plain on the sea-shore, and on its western side the *River Impero* falls into the sea: it is surrounded with walls; and towards the sea are three forts, one at each end, and the other near the middle of the town; and, towards the cape, are some fishermen's houses, and an octagonal fort upon a point, to defend the anchorage, which is opposite the town, within cannon-shot, on muddy ground; but ships lie farther out, in deeper water, on the same ground. Both places are quite exposed to the sea-winds.

The principality of Oneglia is divided into three valleys, *Oneglia*, *Maro*, and *Precla*, of which the first is covered with fruit-trees, intermixed with houses, so as to have the appearance of a continued orchard. Wine, fruits, and excellent olives, abound here. The chief export is the oil of the latter.

CAPE DELL' MELLE lies at the distance of 6 miles East [*E.N.E. $\frac{1}{2}$ E.*] from Cape Verde or Oneglia. This cape is a large high point, almost round, and projecting far into the sea. It has a square watch-tower on it, with two houses adjoining. Between the two capes, at rather more than a mile to the N.E. of the first, is the *Marina di Diano*, or village of *Dian*, before which you may anchor, at about a quarter of a league from the shore, in 7 or 8 fathoms of water, with the steeple of the church, which is almost in the middle of the village, in a line with another which stands higher up. This anchorage is called the *Ditch of Dian*; the ground is of fine sand and mud, and the anchors hold very well.

At a mile and a quarter beyond Marina di Diano is the *Marina della Rovere*: at three-quarters of a mile more is the village of *Cervo*: at a mile and a quarter farther is the mouth of the *River Andora*; one quarter of a mile to the eastward of which is the *Marina d'Andora*. At half a league *true East* from the mouth of the Andora is *Cape Dell' Melle*.

ALASSIO.—The **POINT COSCIONE** lies at the distance of $3\frac{1}{2}$ miles N.E. by N. from Cape dell' Melle. Between these points is a bay with a sandy shore; and on this, at $2\frac{1}{2}$ miles from Cape dell' Melle, is the town of **ALASSIO**, which occupies a considerable extent on the sea-side, has three small forts, and opposite the middle one a small mole, or quay, for landing goods. To the northward of Alassio several villages, and two small round watch-towers, upon the sea-side, may be seen; and, at rather more than a mile to the southward of Alassio, near the sea-side, is the village of *Langueglia*.

You may anchor opposite Alassio, at the distance of a mile: the best berth is with the church-steeple on, or nearly on, with another farther inland, where there are from 18 to 10 fathoms of water, on sand and mud; as the anchors will not drag here. The S.E. winds blow in; but ships seldom ride with their heads to the wind, because a current generally sets to the S.W.

ALBENGA.—The town of Albenga stands near the shore, at $2\frac{1}{2}$ miles N.N.E. from Point Coscione. At half a league South from Albenga, and nearly a mile from shore, lies the *Isola*, or *Island*, of *Galinara*, which is about a mile and a half in circumference. It is very high, and has a watch-tower. To the westward of this isle you may anchor,

in

in 9 or 10 fathoms, with a fast upon the island. There is a channel between the coast and island, having, in the middle, a depth of 9 fathoms, but it is flat or shoal near the coast; and, at the nearest point of the island, there is also a small shoal.

POINT ALBENGA is the point of the mouth of the *River Arosio*; it is very low and sandy, with trees about it. There is, also, at its extremity, a small fort; and, to the westward of it, a large monastery. The town of Albenga stands in a plain, with several towers about it, which the captains of rovers built in former times, to commemorate their victories.

FROM THE ISLE GALINARA to Cape Noli the bearing and distance are N.E. by E. $\frac{1}{4}$ E. [N.E. $\frac{1}{4}$ N.] 11 miles. The coast between forms a large hollow or bay, having on it the town of *Loano* and several villages, as *Ceriale*, *Berghetto*, *La Pietra*, *Barzi*, *Finale*, *Versi*, and *Varigotti*. *Loano* is 3 miles to the northward of Albenga, and you may anchor off it in from 12 to 10 fathoms of water. The smaller town of *Finale* is 3 miles to the west of Cape Noli, and before this you may anchor in from 8 to 5 fathoms; but here is no shelter from the sea-winds. Behind the town, on a little eminence, are two considerable forts, near to each other, by which and Cape Noli this place may be known, when coming in from sea. *Varigotti* is a small village, standing near a point of rocks, a little to the westward of Cape Noli; between is a sandy shore.

CAPE NOLI is a large point, very steep, and smooth on the top, stretching a little way out to seaward. At 2 miles to the North from the Cape is the town of *NOLI*, seated in a sort of bay, having a sandy shore, and off which you may anchor, in 8 or 10 fathoms, with an off-shore wind. *Noli* may be known by several square and round towers, similar to those of Albenga. The inhabitants of this town are chiefly fishermen. At 3 miles N.E. $\frac{1}{4}$ N. [N.N.E.] from Cape Noli lies the *Isola de Bersezzi*, an islet having some ruins upon it, at about 350 fathoms from the main land; between are 7 and 8 fathoms of water. To sail through this passage it is necessary to keep in mid-channel, and to give a berth to some rocks above water, which lie near the shore. You may anchor to the westward of this isle, close to which are 12 fathoms of water. At a mile to the N.N.E. of the isle is *Cape Vado*, and between is the village of *Bersezzi*, on a mountain nearly covered with trees.

From **CAPE NOLI** the entrance of the PORT of GENOA bears N.E. by E. $\frac{1}{4}$ E. [N.E. $\frac{1}{4}$ N.] distant 26 miles.

CAPE VADO, lat. $44^{\circ} 15'$, long. $8^{\circ} 25\frac{1}{4}'$ E., stretches some distance out to seaward: it appears whitish at a distance. On its summit is the fort of St. Stefano and the ruins of some old fortifications. The road and town of *VADO* are to the N.W. of the cape; and in the bottom of the road are some houses along shore, with a small chapel, before which you may anchor, in 5 or 6 fathoms, and carry fasts on shore: the ground here is of mud and weeds.

VADO is defended by Fort St. Lorenzo, which is nearly half a mile to the S.E. of the town. You should not approach near this fort, because some sunken rocks lie off it. Large ships anchor in the road farther out. The East and S.E. winds blow in here, and generally cause a great swell; but, as the ground is good, there is little if any danger. S.W. winds also send in a great swell; but you must be particularly guarded against winds from the N.W., which frequently blow with great violence. Between Fort St. Lorenzo and the town of *Vado* the *River Segno* discharges itself into the sea; and to the northward of *Vado*, nearly a mile, is the little *River Quigliano*, from both of which, in the winter, a great flood of water falls into the sea.

SAVONA stands nearly 4 miles to the north-eastward of *Vado*: at a mile to the W.S.W. of *Savona* is the village of *Loggino*, with several manufactories for earthenware; and, between, the little river of St. Bernard falls into the sea. The town is defended by a considerable fortress, which stands to the south of it, upon a rock near the sea. Before the town is a mole, the entrance of which lies open to the N.E., but it is now almost choked up with sand and rocks, and within the greatest depth is 7 or 8 feet. You may lie without the mole, with a hawser fast to it, in 12 or 14 feet of water; and, in going in, you must keep close to a large point on the western side, where the water is deepest.

FROM **CAPE VADO** to the Harbour of GENOA the bearing and distance are E. $\frac{1}{4}$ N. [N.E. by E. $\frac{1}{4}$ E.] 23 miles. All the coast between appears very high, and is covered with towns, villages, and fine seats, near the sea-side. The nearest village to the northward

northward of Savóna is *Arbizola*; thence follow *Cassizi*, *Prinosa*, *Varaggio*, *Inurea*, *Cogareto*, *Arenzano*, *Piano*, *Lesina*, *Voltri*, *Parmaro*, *Castellazza*, *Cornigliano*; the last is situated at the distance of half a league to the westward of Genoa; and between it and the city is *S. Pietro de Arena*, a suburb, containing many magnificent buildings, and extending along a sandy shore.

GENOA.—The city of Genoa, beautified with noble buildings, stands at the foot of some high mountains, at the bottom of the Gulf of the same name, and may be seen at a great distance from sea. There is a wall, not only about the town, but around the mountain, which is cultivated and covered with fine gardens. The port is before the town, and is formed on the south by two moles, 16 or 18 feet above the level of the water; the one on the east, and the other on the west, side. That on the east, which stretches to the westward, is called the *Old Mole*; and that on the west, which stretches eastward, [S.E. by E. $\frac{1}{2}$ E.] is called the *New Mole*. The mole-heads are about 300 fathoms asunder. Upon the summit of a high point of rock, on the west of the New Mole, (distant about a cable's length,) is the *Lighthouse*, a lofty square white tower, with a lantern on its top, which may be seen at a great distance; and on this tower signals are made on the approach of shipping by day. In coming from the westward, give a berth to the point on which the lighthouse stands, in order to avoid some rocks which lie off it.



Land and Lighthouse of Genoa, when Cape Fino (A) bears nearly East.

You may range very near the head of the New Mole, when you come to an anchor there, the depths being 10 and 12 fathoms close to it; but you may not approach so near to the head of the Old Mole, as some loose rocks lie a little way from it. There is no difficulty in sailing in between the mole-heads, as there is sufficient room for the largest ships: being in, you may moor behind the moles, with a cable or two fast thereon, and an anchor out a-head.

The general anchorage for large ships is behind the New Mole, in from 8 to 5 fathoms of water, mud and clay bottom, good holding ground. The common way of mooring is with an anchor out a-head, and two fast out a-stern to the New Mole. There is plenty of room for four or five sail to lie at their anchors, and to moor with a cable each way, which appears to be preferable, especially in the winter, in which season the North and N.E. winds blow very strongly from the mountains behind the city. The eastern side of the harbour, within the Old Mole, is made use of by merchant-vessels only, the depth being insufficient for large ships. Besides the lighthouse on the western side, there is a high and conspicuous round-tower on this side of the harbour.

In the bottom of the port, towards the middle of the town, are two basins, shut up with a chain, one of which is for the national galleys, which are numerous, and the other for small trading vessels: there is plenty of good water to be had at several places. With the winds at S.S.E. and S.E., the sea runs very high in the harbour.

There is anchorage in the roads from between one to two miles without the mole, in from 10 to 24 fathoms, clay bottom, with the lighthouse bearing from N. by W. to N.N.W.

Wood may be purchased tolerably cheap, and water may be obtained in the old mole, sufficient for any number of ships. You fill the casks in the boats with a hose. Fresh beef, remarkably good, vegetables, and refreshments of all kinds, may be had, at a reasonable price. The manufactures of Genoa consist of damasks, silks, velvet, and plush, and some trade is carried on in oil, wines, and corn.

DESCRIPTION.—We here annex some lively passages, descriptive of Genoa, selected from "Letters from Abroad," attributed to Mr. Leigh Hunt, 1822.

"GENOA is truly '*Genoa the Suberb*.' Its finest aspect is from the sea, and from the sea

sea I first beheld it. Imagine a glorious amphitheatre of white houses, with mountains on each side, and at the back. The base is composed of the city, with its churches and shipping; the other houses are country seats, looking out, one above the other, up the hill. To the left are the Alps, with their snowy tops: to the right, and for the back, are the Apennines. This is Genoa. It is situate at the very angle of the pointed gulf, which is called after its name, and which presents, on either side, as you sail up it, white villages, country-seats, and olive-groves.

"It was at two o'clock, on the 15th of June, that our vessel entered the harbour. Our arrival did not diminish our idea of Genoa: but our notions of the Italian countenance were formidably startled by the pilot-boat, which came out to offer its assistance in conducting us by the mole. The mole had been greatly injured by the storms of the preceding winter.* The boat contained, I think, as ugly a set of faces as could well be brought together. It was a very neat boat, and the pilots were singularly neat and clean in their persons; but their faces!—

"We had scarcely got rid of our ugly men, when we were assailed with a much worse sight, a gang of ugly boys. They were a set of young knaves, poking about for what they could lay their hands on, and came loitering and hanging about the vessel under pretence of asking charity. Their fathers and mothers, or *their* fathers and mothers, or manners and customs *ad infinitum*, had much to answer for in contriving such a set of juvenile vagabonds. They clung about the sides of the vessel, with faces, and hands too, like monkeys. They had no foreheads, and moved their hands as if they were paws. Never did we see a more striking look of something removed from humanity; and the worst of it was, they had no sort of comfort in their faces; their laugh was as melancholy, yet unfeeling, as their abject and canting whine. They looked like impudent squalid old men of the world, in the shape of boys; and were as pale and almost as withered.

"Boats with awnings were rowing backwards and forwards, many of them, particularly as the afternoon advanced, containing bathers, who dressed and undressed themselves, as we went along, in the most unscrupulous manner. One of the very commonest sights was to see men in their shirts; and not a very uncommon one, ladies in their company. People bathed among the shipping at all times of the day, and ladies would pass them, nothing wondering, in boats. This grossness I witnessed afterwards at Leghorn; and I have seen people bathing in the Arno in the very middle of Pisa.

"We had not been long in the harbour before we inquired, with all the eagerness of voyagers, for our fresh provisions. In Italy, we also looked for our heaps of fruit; and we had them—in all the luxury of baskets and vine-leaves, and a cheapness that made us laugh. Grapes were not then in season; but there were figs, apricots, fresh-almonds, oranges, pears, and gigantic cherries, as fine as they were large. We also took leave of our biscuit for excellent bread; and had milk brought to us in bottles, which were stopped with vine-leaves.

* "Genoa, Oct. 23, 1823.

"This government, finding the harbour much exposed to south winds, have determined to lengthen the mole or pier, which lies to the east of the city, 300 French feet, in a direction bearing W.N.W.; and, in consequence of which, on the 21st instant, a grand platform, or hulk, 82 French feet in length, 40 in width, 38 deep, of which 8 feet will be above the water line and 30 under, was sunk at the above distance from the extremity of the pier; its head lies at S.S.W. and the stern at N.N.E. We, therefore, think it our duty to make this communication, that navigators entering this port, in a dark night, may be aware of this improvement, and keep more towards the middle of the harbour, to avoid accidents."

Again.—"With reference to our letter of the 23d ult., we have now to acquaint you that the platform, a hulk, which was sunk at the distance of 300 French feet from the extremity of the Old Mole or eastern pier, and upon which men were working day and night, in order to fill it up with brick and stones, cemented by pozzulana; a strong gale from the south came on, with a rough sea on the 31st of October, which destroyed all the hulk that was not filled up; so that there remains at present but 10 feet of water on the most shoaly part of the platform. Work cannot be recommenced till next spring; in the meanwhile government has ordered a pontoon to be got ready, which is to be moored with the chains close to the spot where the platform is sunk, and to have a light hoisted, as a warning to navigators. We are apprehensive that, in very rough weather, the vessel will not be able to keep her station, and we therefore advise masters of vessels on entering this port to keep towards the middle or left side of it, to avoid getting foul of the hulk, which lies with its head to the S.S.W., and stern to the N.N.E."

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to form the harbour: through this channel a galley may pass, if conducted by a person acquainted with it. From the middle of the island, Palmaria, a long point of sand and mud stretches out, under water, towards a convent that stands upon a point to the eastward of the town: in this part there are not more than $2\frac{1}{2}$ fathoms of water; but between the two eastern points of the entrance are 9 or 10 fathoms. You may anchor in 6 or 7 fathoms, and lie secure from all winds; being sheltered on the west by the above-mentioned bank, which should be approached with caution.

Off the south side of Palmaria is the Islet *Tino*, and between is a narrow passage, having from 16 to 18 fathoms of water. Close to the southward of Tino are two rocks above water, and several which are covered, and require caution: approach no nearer to them than the depth of 14 fathoms. Just off the eastern end of Palmaria is an islet of rock, called *La Scola*, with a square castle on it, and having close to it 6 fathoms of water.

The GULF of LA SPEZIA (antiently *Portus Lunæ*) is one of the best harbours in the Mediterranean Sea. It is, at the entrance, 5 miles broad, and 6 deep; and has good soundings all over it. On the western side of the Gulf, at two miles to the eastward of Porto Venere, is the citadel or fort of *Santa Maria*, (St. Mary,) which stands on the outer end of a long point of rocks, fortified on all sides. From this point to the town of SPEZIA, which is at the bottom of the gulf, the distance is $3\frac{1}{2}$ miles. Immediately within the citadel of St. Mary is a creek, about 250 fathoms wide, and nearly 400 deep, where a few vessels may anchor in 4 or 5 fathoms. Beyond this, on the north, is another, larger and deeper, where there are 5 or 6 fathoms, the ground mud and grass; but this is allotted for *quarantine only*. Another is described hereafter.

The town of Spezia is surrounded with very old walls; its figure is almost square, and stands on a plain by the sea-side; before which there is a small kay for landing; but it can be approached by boats only. In the vicinity are numerous villas, with plantations of olive and other fruit-trees.

Ships may anchor almost all over the gulf, in from 18 to 12 fathoms. You may run ashore, in case of necessity, opposite the town, the ground there being muddy.

On the eastern shore, at nearly 3 miles from the town of Spezia, is the small village of *St. Terenzo*, near a point of the same name: and, at $2\frac{1}{2}$ miles farther, to the S.S.E. is the town of *Lerici*, on a point of land, upon which, also, near the town, is a small fort. At a mile and a half to the south-eastward of Lerici, and 5 miles S.E. $\frac{1}{2}$ S. [*S.E. by E. $\frac{1}{2}$ E.*] from Fort Sta. Maria is Cape Magrezo or Point Corro, the south-easternmost point of the Gulf of Spezia.

DIRECTIONS FOR THE GULF OF SPEZIA, or SPEZZIA, (pronounced *Spedzia*), BY A CAPTAIN OF THE BRITISH NAVY.

CAPE MAGREZO, on the eastern side of the gulf, is very high and bluff. Of the islands on the opposite side, Palmaria is higher, as well as much larger in extent, than either of the others. It is nearly a mile and a half in length. As there are a number of sunken rocks near Tino, it is advisable to give the outer, or S.W. one, a good berth. The islet *La Scola* lies to the eastward of Palmaria, at about 160 fathoms distant: between these are some sunken rocks. When you are to the northward of this islet, which has a square castle on it, (as before noticed,) you will see Port Veneré open, between the north side of Palmaria and the main; at the same time you will see the citadel, or Fort St. Mary, standing on a high rocky point on the western shore. From this point to the bottom of the bay, where the town of Spezia stands, is about $3\frac{1}{2}$ miles: within this extent are several creeks, of which the three southernmost are capable of receiving ships of any size, to anchor, and moor with safety, and sheltered from all winds. Of these, the southernmost lies between the citadel and the point to the northward of it, on which point is the *Lazaretto*, surrounded by a very high wall: this creek is about one quarter of a mile wide, and half a mile deep, and has from 6 to 3 fathoms of water in it. In the next creek none but ships under quarantine are allowed to enter: this creek is between the Lazaretto and the point to the northward, on which there is an old square castle; it is much deeper and wider than the first. Ships of war, in general, lie off it: this creek is about one-third of a mile wide and two-thirds of a mile deep, and has from 7 to 3 fathoms in it. The third, or northernmost, of the large creeks is not so good as the last-mentioned; it is wide, but not so deep, and is more convenient to enter

enter and sail from; as you cannot, without a leading wind, sail into or out of the former, but you may turn in or out of the latter. The best anchorage is over to the south shore, in 5 or 6 fathoms. There are some other small creeks between this and Spezia, but fit for small craft only. Not only in the creeks, but all over the gulf, the bottom is very good, soft, and muddy, with sea-weeds.

The winds from South to E.S.E. blow directly into the gulf, and with great violence from between the mountains, which are very high, and therefore ought to be guarded against.

At the bottom of the gulf there is a shoal, stretching to the distance of a quarter of a mile from the shore, which boats only can approach: it lies off the S.E. end of the town of Spezia.

All along the eastern side of the bay are sandy beaches, where there is good landing, but only one cove where small craft can be sheltered; the south point of this cove, on which there is a square tower, lies about East from the citadel.

There is a sand-bank in the middle of the entrance of the bay, between the island Palmaria and Cape Magrezo, extending E.N.E. and W.S.W. about three-quarters of a mile in length, and about one-quarter of a mile broad, on which are from 9 to 12 fathoms. Without it, the water deepens gradually to 15 fathoms. There are no rocks or shoals in this bay, excepting off the northernmost point of the second or Lazaretto Creek, where some sunken rocks run off to the distance of 80 yards from the point; therefore ships ought not to approach nearer than in 6 fathoms. The tides are very irregular here, and never rise more than 3 feet at full and change, and it is generally considered high water at half-past one.

There is good anchorage in every part of the gulf; and though the wind blows directly in, it makes no great sea, as the bank in the entrance breaks off its force: ships may anchor in any depths, from 18 to 7 fathoms, the bottom being as already described. Ships must moor in the creeks, as there is not room sufficient to swing at single anchor.

There is little current near the coast, but, at the distance of 6 or 8 leagues out, it sets to the W.N.W. and contrary. During the winter the N.W. winds are prevalent: in summer there is a regular succession of land and sea breezes. Water may be had here in great plenty, and very good, in the northernmost creek; or at a well a little farther to the northward. Wood may be had here by purchasing, but in small quantities; there is plenty of broom-stuff on the east side of the gulf. The country around is very ill-cultivated, and thinly peopled. Provisions and other refreshments are to be had here in great quantities, though the inhabitants are chiefly supplied from Leghorn and Genoa. There are several forts on the shore, but in a ruinous state; the strongest is that which stands on the south point of the Lazaretto Creek, and is called St. Margaret's Fort.

This being a port where all ships bound to and from Genoa perform quarantine, there are generally merchant-vessels, and a few small craft which trade, coasting, with the produce of the adjacent country. Fishing-boats and feluccas, with commodities, and passengers, going to and from Genoa, Leghorn, and the adjacent places, are the only vessels belonging to it; the country around being so mountainous, and the produce very little, it is a place of no trade.

The River Magra is less than half a league to the eastward of Cape Magrezo, and is a considerable stream. The Genoese territory ends at a league more to the east. The town and fortress of SARZANA stand at the distance of a mile from the eastern or left bank of the Magra, and at a league and a half from its mouth, which is obstructed by shoals.

The coast hence to the southward is described in Section VIII. hereafter; and we now proceed to the islands of Corsica and Sardinia.

VI. THE ISLAND OF CORSICA.

CORSICA, by the antient Greeks called KYRNOS, and now an appendage to the kingdom of France, is about 96 miles in length, from North to South, and of an irregular form in every direction. The interior part is very mountainous; a long chain of mountains

mountains dividing it into two unequal parts, in which thick forests are dispersed : it is watered by a great number of rivers, well supplied with fish, and the coasts abound with tunny, sturgeon, oysters, &c. The summits of the more elevated mountains are covered with snow during great part of the year. The chief of these are *Monte Rotundo* and *Monte de Oro*, the first 9,000 and the latter 8,700 feet high, above the level of the sea. On the summit of Mount Rotundo is a lake, encased in a basin of granite.

Quadrupeds are very numerous ; the horses are small but lively ; asses and mules are likewise small, but of wonderful spirit and agility. Cows and oxen are tolerably large, but, in general, lean : the cows give but little milk, from want of better pasture ; the inhabitants generally make use of oil instead of butter. Goats and sheep are abundant. Wild boars and foxes are common. Oranges, lemons, figs, almonds, chesnuts, and olives, flourish. The last is a source of riches. Vines grow in almost every part of the island ; the wines which they produce are sweet and strong, and generally used by the Germans instead of mountain. Other trees are the mulberry, laurel, myrtle, &c. Wheat is cultivated ; as, likewise, barley, rye, and millet ; and the inhabitants, in summer, reap a good harvest. The bees produce a great quantity of honey, which is not, however, so much sought for, as it is sometimes bitter ; but the wax is excellent.

The mountains are rich in lead, iron, and copper, with some silver. Here and there are found mines of alum and saltpetre. The granite of Corsica is nearly equal to the Oriental. Porphyry, jasper, talc, amianthus, emeralds, and other precious stones, have been found in the mountains, and the southern coasts abound with beautiful coral. The greater part of the eastern coast is low ; but the others are, in general, rocky and precipitous. The air is healthy, excepting in a few marshy places towards the East. The chief port is AJACCIO (pronounced *Ajatchio*) on the S.W. In the following description of the coast we commence with the northern point, and thence proceed, on the east, to the Strait of Bonifacio, and then to the N.W., &c.

CAPE CORSO or CORSE, a great promontory stretching to the north, forms the northern portion of Corsica. This head-land is 5 miles broad, and of a moderate height near the sea, but the interior is a part of that mountainous range which has been already mentioned. At about a mile from the middle of the north coast is an islet, named *Giragliu*, with a watch-tower on it ; and there is a passage between it and the cape-land, having a depth of from 9 to 7 fathoms ; but this channel should be attempted only with a leading wind. On the eastern side of the cape is the cove of *Santa Maria*, with a sandy landing-place, where a vessel may anchor in westerly winds, but it is exposed to the East and S.E.

There are several towers on the N.E. side of Cape Corso ; of these the easternmost is on the eastern islet of those named *Finocchiarolo* or *Figaroni*, in lat. $43^{\circ} 0'$, or nearly so. At the distance of $11\frac{1}{2}$ miles S. by W. $\frac{1}{4}$ W.^a [$S. \frac{1}{2} E.$] from that islet is CAPE SAORO, a broad point, which stretches a little way out to sea ; it is distinguished by a tower, as are several other points of the neighbouring coast.* At 6 miles to the southward of Cape Saoro is the town and port of Bastia.

BASTIA is the chief town of the department of the Golo,† and the capital of Corsica. It is commanded by high land, in the centre of which the sea forms a small indent, which is defended by a mole. The town is divided into two parts, *Terra Nuova* and *Terra Vecchia*, (New Town and Old Town,) in the former of which is a citadel, surrounded with fortifications. The harbour is small, and fit for small vessels only. Its latitude is $42^{\circ} 42'$. The general exports are skins, wines, pulse, oil, and figs ; which abound in the surrounding country.

* We have an eye-draught of the coast between Cape Corso and the *Marina de Meria*, an extent of 5 miles, taken on board H. M. Ship Victory, 14th Nov. 1823, in which the Victory, Canopus, Triumph, and Renown, are represented at anchor, in 30, 24, 34, and 30, fathoms, 5 miles to the eastward of the village of *Macinagio*, with the Finocchiarolo Islands bearing W.N.W. To the Southward or S.W. of these isles there is anchorage in from 18 to 3 fathoms, brown sand and mud. The remarks on the Chart are as follow : " The isles are three in number, and the easternmost, having a tower upon it, forms the road. A fleet of any number of ships may anchor here, sheltered from N.N.W. to S. by W., good ground. In coming round Cape Corse for this anchorage, approach no nearer to the coast of Corsica than in 15 fathoms, until you open the town of *Macinagio*." Variation, 20° West.

† The northern department of Corsica is that of the *Golo* ; the southern, that of the *Liamone*, of which the chief town is Ajaccio.

The entrance of the harbour has been described as only 90 yards wide, and exposed, not only to easterly winds, but to very dangerous puffs of land-winds, chiefly from the N.W., which at times cause much damage to the barks and other vessels. This entrance lies between the head of the mole and the *Lion*, a great rock to the southward of it, and on the larboard side in entering. It is practicable for only one vessel to enter at a time: they must take care to keep exactly in mid-channel, and so soon as they have anchored, a cable is immediately carried on shore to one of the stone pillars erected for that purpose on the mole: they lie in 3 or 4 fathoms, on a ground covered with weeds and oaze. At the end of the mole is a watch-house, where, in bad weather, a fire is lighted, to direct vessels during the night.

There is anchoring-ground, in 10 and 11 fathoms, at a cable's length to the eastward from the mole and the northern part of Bastia. To the northward of this, and at the end of the suburb, is a brook of very good water, commodiously situated for shipping.

At two miles to the southward of Bastia is the entrance of the *Etang* or *Lagoon* of *Biguglia*, and thence to a projecting point at the mouth of the River Golo, named *Punta D'Arco*, the bearing and distance are nearly S. $\frac{3}{4}$ E. [S.S.E. $\frac{1}{2}$ E.] 3 leagues. In all this space the land is low, marshy, and green, except the point which rises a little above the rest. At 5 miles to the southward of the mouth of the Golo is that of the *Fiumalto*, the north side of which is distinguished by the Tower of St. Pelegrino.

The coast hence trends nearly true South, 22 miles, to the Tower of Aleria, on the south side of the mouth of the *River Tavignano*. There are several towers between, on different points of the coast, and the entrances of several little rivers. *CORTE*, the chief inland town of Corsica, stands on the north side of the River Tavignano, at the distance of nearly 9 leagues above the Tower of Aleria.

There is said to be a dangerous sunken rock about 4 miles off the Tower *Fiorentina*, in latitude $42^{\circ} 17'$, and 4 leagues to the N.E. $\frac{1}{4}$ N. [N.N.E.] from the Tower of Aleria. At about 4 miles to the southward [S.S.E.] of this rock there is said to be another of the same description.

From the mouth of the *Tavignano*, about which are several shoals, the coast trends S.W. $\frac{3}{4}$ W. [nearly S.W. by S.] $8\frac{1}{2}$ miles, to the River *Fiumorbo*; and thence S.W. by S. [nearly S. by W.] 9 miles, to the Tower of *Solenzara*, where high land commences, the anterior coast being low and sandy. A dangerous shoal, called the *Marisc*, lies at the distance of a mile off the mouth of the River *Fiumorbo*, having close to it a depth of 14 fathoms.

On an elevated point of coast, by some called *Cape Facla*, 9 miles to the southward of the Tower of *Solenzara*, is the Tower of *Faela*: to the southward of this is a cove, with a sandy beach, called the *Plage de Saracco*, wherein small vessels may anchor with westerly winds.

PORTO VECCHIO.—The Tower of St. Cipriano, or St. Cyprian, which is 6 miles to the south-westward of that of *Faela*, distinguishes the western side of a cove of the same name, and the northern side of the entrance of *PORTO VECCHIO*; the last is an inlet, formed by Cape St. Cipriano on the north, and Cape *Della Chiappa* on the south; distant from each other rather more than a mile, in a true N.N.W. and S.S.E. direction. The land on both sides is high, and the mountains here reach nearly to the sea-shore. There are several islands at the entrance of *Porto Vecchio*, which form three distinct channels; the largest of these islands, called *Galera*, or *Pecorella*, lies rather nearer to Cape St. Cyprian than to Cape *Chiappa*: it has some rocks about it, particularly on the north side, whence they stretch above a cable's length to the N.E.; by giving it a berth, you may, in any ship, sail in between it and Cape St. Cyprian: this is called the *North Channel*. S.W. by S. [S. by W.] of *Pecorella* Island, above one-third of a mile, is a rock called *Chiapino*, having some smaller rocks about it. Between these is the *Great Channel*, which is also the best, having from 12 to 15 fathoms of water in it. The *Chiapino* lies about 200 yards N.E. from Cape *Chiappa*, and forms, with the cape, the *Little Channel*, in which there is not less than 10 fathoms of water.

Porto Vecchio (pronounced *Vekkio*) is $2\frac{1}{2}$ miles deep, and there is good anchorage from the islands at the entrance to that which lies at the farther end. In the middle are 5 or 6 fathoms of water, on grass and oaze; but, as the land-winds are violent, you must ride with a spring upon your cable. The winds from the sea can do no hurt, the swell being broken off by the islands at the entrance. Good water may be had at two places;
one

one on the larboard, and the other on the starboard, side of the anchoring-place. The town and fort are at the west end of the harbour; but the former is nearly abandoned, and the latter is in ruins, owing to the noxious qualities of the air, arising from the marshy grounds in the neighbourhood, which renders the place almost uninhabitable. In advancing from the eastward, this port may easily be known, by a high rocky mountain, standing near it, like a stately column.

Southward of Cape Chiappa, at from $1\frac{1}{2}$ to 3 miles, are four small islands, lying about N.E. by E. and S.W. by W., called the *Cervicales Islands*: there is a channel for small vessels between them and the shore, with 8 to 12 fathoms of water, where they may also anchor, if necessary. Of these isles, the northernmost is called *Cibiciana*; the second, *La Minora*; the third, *Santa Suera*; and the fourth, *La Servi*. Off *Cibiciana*, about half a mile, is a rock above water, called the *Verararo*, or *Small Bull*; and $1\frac{1}{2}$ mile S.W. of it, lies another, called the *Great Bull*, to the eastward of which is a white bank, with only 14 feet of water on it, though there are between them, near the Bull, 35 fathoms, and 25 close to the bank.

At 3 miles W. by S. from *La Servi* is *Porto St. Giulia* or *St. Giulias Cove*, at the entrance of which you may ride in 10 fathoms of water; and close to the southward of it, divided by the point of *Raphaelle*, is that of *Porto Novo*. About a mile to the southward of *Porto Novo* is *Sponzalia Tower*; and, $1\frac{1}{2}$ mile farther, is *Point Precilba*, high and projecting; near which, to the southward, is *Cape Rondana*, also very high, which forms the north point of the entrance of *Santa Manza*.

Santa Manza Harbour is about 2 miles deep, from Point *Santa Manza*, on which stands a tower bearing the same name, and which lies about $1\frac{1}{2}$ mile to the southward of *Cape Rondana*; it is about one mile across, narrowing a little as you proceed to the S.W. towards the head, where good water may be easily obtained. The anchorage is in from 10 to 14 fathoms of water, on good ground, where you may lie very safely, though N.E. winds send a swell in: small vessels may go farther in, and anchor in from 4 to 5 fathoms of water, entirely sheltered.

From *Santa Manza Point* to *Fiumara Point* the distance is $4\frac{1}{2}$ miles, S.W. by W.; the land between is very high and steep. *Point Fiumara* to *Cape Chiantarella* is the southernmost point of Corsica; and, at about 500 or 600 yards to the southward of it, lie some rocks, partly covered, called *Chiantarella*: care must be taken to avoid them. Between *Santa Manza Point* and *Cape Chiantarella*, at the distance of 2 or 3 miles off the coast, there are several islands, rocks, and shoals, with very unequal depths of water near them; and, although there are good channels between them for those who are acquainted, it is advisable for ships bound through the *Strait of Bonifacio* to pass to the eastward and southward of them all.

From *Cape Chiantarella* the coast trends nearly true west, 2 miles, to *Cape Blanco*, or the *White Cape*, by some called *Cape Antonio*, by others the *Pierced Cape*, the rock being pierced through; and thence, to the entrance of *Bonifacio Harbour*, it is nearly 2 miles N.N.W.

THE STRAIT OF BONIFACIO is the channel, or passage, which divides the island *Corsica* from *Sardinia*: it is bounded on the north side by the south part of *Corsica*, and the islands *Cavallo*, *Lavessi*, and *Perduto*, all of which are encompassed with dangerous rocks and shoals: and, on the south side, by the north part of *Sardinia* and the *Barelino Islands*, hereafter to be described with *Sardinia*.

The breadth of the strait between *Capes Blanco* and *Longo Sardo* is about 6 miles; but farther eastward, between *Lavessi* and the *Barelino* islands, it is less than 3 miles. Ships of all descriptions may navigate this strait without fear, there being no danger whatever, if they keep in mid-channel, although the sea is often very high, and the waves dash along with a prodigious roaring, owing, perhaps, to its passage being made narrower on the east side, by the islets and rocks adjacent to the main islands. In sailing through, it is necessary to give *Lavessi* a good berth, in order to avoid the sunken rocks, which lie off its southern side.

The **HARBOUR of BONIFACIO** is a creek, a mile in depth, about 70 fathoms in breadth, and appears like a river. It can be entered in fair weather only, and with a fair wind. At the entrance are 14 fathoms of water; and, a little within, on the left hand, are two or three rocks above water; but you may pass close to them, and keep in mid-channel, until you get up opposite the town, where there are 5 or 6 fathoms of water.

water. On the starboard side of the entrance is a fortress, off which there is a large rock above water, close to which you may pass: on the larboard point is a watch-tower, *La Madonetta*; and, as you proceed in, on that side, there are two creeks, where galleys may anchor. Near the bottom of the port, on the starboard side, is a considerable citadel, with the town near it, and a few houses on the sea-side: opposite this castle you may anchor, in oazy ground, in from 4 to 6 fathoms of water, and moor across the harbour. Good water may be had at some gardens in the bottom of the port.

From the entrance of *Bonifacio* to *Cape Fieno*, the bearing and distance are N.W. by W. $2\frac{1}{2}$ miles. The land between is very high, and the mountains stretch downward close to the shore. It forms two indents, or coves, called *Fachola* and *Paravane*; in the former of which there is shelter from all winds for small vessels; but it is necessary to be well acquainted with the channel, which is made very narrow by the islands in the entrance. *Cape Fieno* is foul and rocky, to full 3 cables' length off, as is the coast between it and the above-mentioned coves, though not to so great an extent from the shore.

GULF OF VENTILEGNA, &c.—From *Cape Fieno* to *Cape Figari* is about $4\frac{1}{2}$ miles N. by W. $\frac{1}{2}$ W. [*N.W. by N.*] In this space is the Gulf of *Ventilegna* and the Port *Figari*, separated by the point of *Ventilegna*, which is foul a cable's length off. There are several rocks and islets on the starboard side of the gulf also; but, at the bottom, is a fine sandy beach. Port *Figari* is about one mile wide, and has several rocks close to the larboard side, as well as those on the starboard, leaving a clear passage between of 10 or 11 fathoms of water. Ships generally anchor farther in, in 6 or 7 fathoms of water. The direction of the port is N.E. and S.W., and it is about one mile and a half deep, having at the bottom several little islands, which extend to the mouth of the little river *Canalle*.

FROM CAPE FIGARI to *Point Roccapina* the course and distance are nearly N.W. 2 leagues: this point has a tower on it, and a convenient landing-place on the west side. About a mile westward of *Cape Figari* lie the *Eculls*, or *Briccia Rocks*, stretching off the shore, to 3 or 4 cables' length: farther to the N.W. is *Olmeto Cove*, formed on its west side by a point of the same name, which is very high, as well as the other parts of the coast, and projects far into the sea, with many detached rocks near it; and, between it and *Point Roccapina*, is another cove, westward of which are some sunken rocks, lying nearly a mile off the shore.

FROM POINT ROCCAPINA to *Point Guadiola* the distance is 4 miles N.W. $\frac{1}{2}$ N. [*N.W. by W. $\frac{1}{2}$ W.*]; there are two coves between, separated by *Point Barbarina*. About $3\frac{1}{2}$ miles farther N. by W. $\frac{3}{4}$ W. [*N.W. $\frac{1}{2}$ N.*] is *Point Tizzano*, which is very high; and, to the south-eastward of it, is a large cove, with an extensive sandy beach.

LES MOINES, or the MONKS.—Very near *Point Tizzano* is a small islet, called *La Botta*; and, 8 miles S. by E. $\frac{1}{2}$ E. [*S.E. by S.*] from the same point, lies a ledge of rocks, called the *Monks*, extending in a broken chain nearly 2 miles N.E. by E. $\frac{1}{2}$ E. and S.W. by W. $\frac{1}{2}$ W. [*N.E. $\frac{1}{2}$ N.* and *S.W. $\frac{1}{2}$ S.*], and about 2 cables' length wide, several of which are above water; they bear from *Cape Fieno* N.W. $\frac{3}{4}$ W. [*W.N.W. $\frac{1}{2}$ W.*] at the distance of 10 miles from it, and are about $2\frac{1}{2}$ miles off *Point Roccapina*, which is the nearest land. The outermost of these rocks is about three-quarters of a mile from the body of the western group, and has 5 feet on it, and 12 to 15 fathoms at a boat's length from it all round: it lies about $4\frac{1}{2}$ miles from the shore of Corsica. There are several sunken rocks between that and the main body, but they are easily discovered by the sea breaking over them. Near the southernmost breakers there are 4, 5, and 6, fathoms of water; the highest of the westernmost group is about 40 feet, and that of the easternmost group about 30 feet, above water. The passage between these rocks and the main has a depth of 15 fathoms, and is very good for those who are acquainted.

In a direct line S.W. by W. $\frac{1}{4}$ W. [*S.W. $\frac{1}{2}$ S.*] from the outermost sunken rocks of the Monks, a bank of about a quarter of a mile in width extends, with 16 fathoms on it, and 25 fathoms close to it on each side: it is composed of coarse sand and stones.

FROM POINT TIZZANO to *Cape Senetosa* the bearing and distance are N. $\frac{3}{4}$ E. [*N. by W.*] a mile and three-quarters. *Tiscara Cove* lies between, where the river *Mortara* falls into the sea. *Cape Senetosa* is very high, and has a tower on it, and a point projecting into the sea, near which lie the *Eccicha Rocks*; and northward of these is another point, called *Cape Chimouri*: there is a passage between the land and the *Eccicha Rocks*, with 15 fathoms of water in it.

GULF of VALINCO or CAMPO MORO.—At $3\frac{1}{2}$ leagues N. $\frac{1}{4}$ W. [*N.N.W. $\frac{3}{4}$ W.*] from Cape Senetosa lies *Cape Muro*, the coast between forming a bay nearly 3 leagues deep, called the GULF of VALINCO. This gulf is quite exposed to westerly winds, but has some tolerably good anchoring-places on the north, as well as on the south, coast, the principal of which is Port Campo Moro. *Port Campo Moro* is upon the south coast, and is known by a large cape at its entrance, on which stands a fortified tower; this cape lies about $3\frac{1}{2}$ miles N.E. from Cape Senetosa, and the land between is very high. Off the Point of Campo Moro, at a musket-shot distance, are two small rocks, which, when sailing into the port, are to be left on the starboard side. So soon as you are within them, you will perceive a great cove and a vineyard, for which you should steer; and, so soon as you are in the cove, you may anchor between the vineyard and the point, at the distance of 2 or 3 cables' length from the shore, in from 16 to 22 fathoms of water, with the tower bearing about N.N.W.: the point will then be on with *Cape Muro*, and you will be land-locked, besides being sheltered by the rocks above-mentioned. Small vessels anchor farther in, and lie in from 10 to 14 fathoms of water, still better sheltered, where they may have one cable on shore. Good water may be had at a spring in the bottom of the cove.

At $2\frac{1}{2}$ miles to the E.N.E. from *Point Campo Moro* is *Portigliola Point*; and at $2\frac{1}{2}$ miles farther, on the same course, is the *Punta Bitorsima*, off which lie a cluster of rocks above water. Between the latter two, and near the former, is the small port of *Giolo*: near the latter, the *River Valinco* empties itself into the sea, off which you may anchor in 14 to 20 fathoms, on good sand, and clean every where; but this anchorage is not safe in the winter-season. There is also anchorage, farther northward, off the tower of *Zille*, in 7 or 8 fathoms of water.

Porto Pollo is on the north side of the gulf, where the anchorage is quite exposed to S.S.W. winds. *Porto Pollo* Point stretches a considerable distance into the sea, and has a tower on it: at the distance of 4 miles N.W. from it, is the point and tower of *Campo Nero*. Between the two is *Cala Ferno*, a cove little frequented. From the last-mentioned cape to *Cape Muro* it is above 2 miles N.W. $\frac{1}{4}$ N.; there is a small cove between, called *Cala d'Orso*, where a vessel may anchor with the winds from N.N.W. to S.E.: on the larboard side are some rocks, and, at the bottom of the cove, is a little river with a sandy beach, where you may land with off-shore winds.

The GULF of AJACCIO, which is the finest bay of Corsica, lies between *Cape Muro* on the south, and *Cape Sanguinara* on the north: these points bear N. $\frac{1}{4}$ E. and S. $\frac{1}{4}$ W. [*N. by W. $\frac{1}{4}$ W.* and *S. by E. $\frac{1}{4}$ E.*] at the distance of 3 leagues from each other. The isles of *Sanguinara* lie to the S.W. of the cape; the larger one has a tower upon it, and some islets and rocks about it: between it and the cape is a channel for small vessels, being about 2 cables' length wide, and $3\frac{1}{2}$ to 4 fathoms deep.

It is necessary, when coming in from the northward, to give *Sanguinara* Island and rocks, which you leave on your larboard side, a good berth; and, when within them, you may anchor at about 3 cables' length from the shore, in from 15 to 18 fathoms of water, abreast of a place called *Fornaci*, near which are a brick-kiln and a tile-kiln; and, about 3 miles to the eastward of it, is a cove, with a house standing in the bottom of it.

The Town of AJACCIO, which is populous, is situate on the north side of the gulf.* On proceeding to the eastward for this place, you will pass a rock above water, called *La Botta*, and, at the distance of a mile farther eastward, another small rock very near the shore, abreast of which stands a chapel. Both of these rocks are to be left on the larboard side, as is the point of the citadel, which you must not approach nearer than to the distance of a cable and a half, on account of a sunken rock, which lies to the southward of that point a cable's length, with 10 feet of water on it: it is about 40 fathoms across each way.

So soon as the citadel bears N. by E. from you, you may steer up N.E. by N. or N.E. for the road, and anchor in 10 to 14 fathoms of water, on muddy ground, with the point of the citadel bearing W.S.W.; or you may run farther to the northward, near the bot-

* NAPOLEON BUONAPARTE, the second son of Carlo Buonaparte, was born at Ajaccio, 15th Aug., 1769. His uncle, Lucien, was archdeacon of the cathedral here. Napoleon was declared emperor of the French, 18th May, 1804; crowned 19th Nov. of that year, and king of Italy, 26th May, 1805. He died at St. Helena, 5th May, 1821. "*His couch the earth; its drapery a willow.*"

tom

tom of the harbour, and anchor in from 7 to 9 fathoms of water, with the point of the citadel bearing about S.W. by S., where you will be quite land-locked. At about a mile and a half eastward from Ajaccio are some rocks above water, called the *Sardineras*, along which you may sail as near as you please; within, to the eastward of these, the largest ships may anchor in *Capitello Bay*, in 18 to 23 fathoms of water, on sand and oaze, one-third or half a mile from the shore; but, with sea-winds, you will lie safer behind the *Sardineras*, in 10 or 12 fathoms of water, than in any other part of the bay.

In the middle of the Gulf of Ajaccio there is no ground at 130 fathoms, and in most parts it is steep close to the shore. South-west winds blow full into the gulf.

From *Cape Sanguinara* to *Cape Feno* the bearing and distance are N.N.E. $4\frac{1}{2}$ miles. *Cape Feno* is very high, and has a tower on it; at about a mile to the southward of it is an islet surrounded with rocks, to which you must give a good berth in passing.

The GULF of SAGONA lies between *Cape Feno* and *Point Carghese*, which bear true North and South of each other, 10 miles; and it is about 6 miles in depth. From *Cape Feno*, about 4 miles E.N.E., is *Point Provenzale*, on which stands a tower; and to the southward of it is a port bearing the same name, fit only for small vessels in the summer-season, where they lie in 8 to 10 fathoms of water, quite exposed to the westerly winds. Three miles and a half farther on is the *Tower Orcina*, and $1\frac{1}{2}$ mile north of it is the *Tower Capigliola*; the coast between forming a bay, which is also the bottom of the gulf, and is called *Palmentogia Cove*. From *Capigliola Tower*, northward, to that of *Sagona*, the distance is nearly 3 miles: this tower is easily known by its whiteness, which is perceptible at a great distance; between is a fine sandy beach: and here the *Liamone*, a considerable river, discharges itself into the sea: to the northward of this river are lofty mountains, which extend quite to the sea-shore; and off the mouth of the river, about a quarter of a mile, is an islet or a rock above water.

The HARBOUR of SAGONA is tolerably good and clean. When sailing in you should steer towards the white tower, which you leave on your larboard side, and run along at about a musket-shot's distance from the shore, and you will pass a small rock under water. So soon as you have passed the tower you may anchor in 9 or 10 fathoms of water, and carry a cable on-shore; small vessels go farther in, and anchor in 5 or 6 fathoms, exposed only to W.S.W. winds. Water may be had at the river, which runs just by.

From *Sagona Tower* to *Point Carghese* an irregular coast trends about $4\frac{1}{2}$ miles to the N.W. [*W.N.W.*], there being some small coves between: the land is all high mountains close to the shore; and *Point Carghese* is known by the tower on the top of its mountain, which projects a great way into the sea. About $1\frac{1}{2}$ mile farther N.W. is *Cape Domigna*; and from it, at less than 2 miles N.N.E., is *Point d'Orcino*, on which stands a tower; and off which, at a musket-shot distance, are some breakers. From *Point d'Orcino*, 4 large miles N. by E. $\frac{1}{2}$ E. [*N. $\frac{1}{2}$ W.*] is *Cape Turghio*, surrounded by rocks above and under water; it has a tower standing upon the high-land, which is a continuation of the mountainous land extending from the eastward.

GULF of PORTO.—From *Cape Turghio* to *Cape Scandola* the bearing and distance are N.N.E. 2 leagues. Between these capes is the GULF of PORTO, which is very little known; and on the north side of which is *Port Giralata*, in which there is but indifferent anchorage.

The ISLE GARGALO, which is about 2 miles in circumference, is very high, and has a fine tower upon it; it lies about 2 miles N. by E. from *Cape Scandola*, and is about 40 yards distant from the shore; about a mile farther to the N.E. is the point of the main land, called *Point Gargalo*, off which are two detached rocks. All the land, from *Cape Turghio* to this point, is mountainous; near the latter is a very high mountain, called *Monte Capo Giacomo*.

About 14 miles N.E. $\frac{1}{2}$ E. [*N.N.E. $\frac{3}{4}$ E.*] from *Gargalo Point* is *Cape Rivellata*. Two miles from *Gargalo Point* is *Punta Bianco*, or White Point, which is of considerable height, with a rock near it; and about 2 miles farther to the N.E. are the *Galeria Rocks*, lying about a mile off the land. Beyond these rocks, about 2 miles, is *Port Galeria*, where there is a fortified tower and a river, but no anchorage for shipping. About 3 miles farther, true North, is *Cape di Valle*; the land between is high and steep, and there is a fine cove, which bears the name of the cape, in which there is a sandy beach, and a river, but no anchorage, except with off-shore winds. From *Cape di Valle* to *Cape Cavallo*.

Cavallo is nearly 4 miles N.N.E. and N.E., with a very high coast, and a tower about midway, called *Truccio*; from thence it is nearly 5 miles to Cape Rivellata, the coast between forming a deep bay, into which a river discharges itself.

CAPE RIVELLATA rises to a great height, and has a detached islet very near its easternmost point, and on the west side a small cove and another islet. It may easily be known by its height, and by being the north-west extremity of the island of Corsica.

GULF of CALVI.—At $3\frac{1}{2}$ miles E. $\frac{1}{2}$ S. [*E.N.E. $\frac{3}{4}$ E.*] from Cape Rivellata is *Cape Spano*, and between these Capes is the GULF or BAY of CALVI, near the middle of which is the town of that name. The town is fortified, and stands on a point of rocks, very steep to seaward: it is nearly 2 miles S.E. by S. [*S.E. by E.*] from Cape Rivellata. To the westward of the fortress is a very high rocky point, near to which, on another eminence, stands a chapel; and westward of this is the Bay of Rivellata, where there is anchorage, with westerly winds, in from 12 to 20 fathoms of water. To the southward and eastward of the town of Calvi is a large cove and sandy beach, off which you may anchor; but the best place is near the town, at 2 cables' length from the shore, in 4 to 6 fathoms of water, on sand and oaze, where you lie with one cable fast to the rocks towards the N.W., and an anchor to the S.E. You should not go farther in than the innermost bastion of the town. In the cove is room for several vessels to lie, sheltered even from the N.N.E. winds, to which you are most open.

In sailing in you may range as close to the point of the town as you please, there being 3 fathoms of water at the foot of it, and ships may likewise anchor here. The South and S.S.W. winds are the most troublesome, because they come between the mountains, and blow in squalls, but they cannot cause any sea. There is a small watch-tower on the sea-side, without the fortress, and an old convent. At the bottom of the cove is a large plain, some marshes, and a pond, where you may water, but close by there is nothing but high mountains.

CAPE SPANO is a long low point, stretching into the sea, at the end of which are several rocks above and under water, which you must not go near; on the top of this point is a round watch-tower, and a little above it, on a rising ground, a small square fort. About 3 miles to the eastward, from Cape Spano, is the fortified village called *Algajola*, situated on the sea-side, above which you may see other villages on the mountains. At about 2 miles to the N.N.W. of *Algajola* is a shoal, with only 4 feet of water on it, and which, therefore, must be carefully avoided.

At 4 miles to the eastward from *Algajola* is *Isola Rousse*; on the S.E. point of the island is a watch-tower, with guns in it; you cannot pass between the island and the land but in boats. Near to this isle there is a large rock above water, to the eastward of which small vessels may anchor with off-shore winds.

From *Isola Rousse* to *Cape Dostriconi* the distance is about 2 leagues East [*E.N.E.*]; and 4 miles farther, to the E.N.E., is *Point Renella*: the coast then bends to the eastward for 5 miles, to *Cavallata Point*, and 2 miles S.S.E. to *Point Mortella*, which is the western point of the *Gulf of St. Fiorenzo*; all the coast between is very high, and affords no shelter whatever. The *Town of St. Fiorenzo* lies 3 miles to the S.S.E. of the tower on *Mortella Point*.

The GULF of St. FIORENZO is broad and deep, and has several watch-towers on the eastern coast, which is steep-to; besides that on the western side, on *Point Mortella*, already mentioned. Abreast of this tower, at 3 cables' length from the shore, there is anchorage in 12 or 13 fathoms of water. In advancing from the westward, approach not too near *Point Mortella*, as some rocks lie off it. Nearly two miles to the southward of *Point Mortella* is *Porto Forno*, abreast of which, at the distance of nearly a mile, is good anchorage for ships of war, in from 12 to 14 fathoms of water, or at 3 or 4 cables' length from the shore, in 9 or 10 fathoms of water, oazy ground: you will then have the town of *St. Fiorenzo* bearing about S.S.E.; *Porto Forno*, W.N.W.; and *Point Mortella*, N.N.W. There are some rocks near the shore, which you must be careful to avoid.

Small vessels may anchor opposite the town of *St. Fiorenzo*, but they must be careful of a rocky ledge which lies above 2 cables' length from the shore; also of a rock which lies off the north end of the town, upon which the sea often breaks: you may pass between these in from 6 to $3\frac{1}{2}$ fathoms of water.

Both

Both in entering and sailing out of this *gulf*, it is advisable to take the mid-channel, or rather nearer the western than the eastern shore; for, without Point Mortella, if the S.W. or westerly winds have prevailed, there is generally a great swell, which may drive you towards the coast of *Cape Corso*, where the water is too deep for anchorage; whereas, to the westward of Point Mortella, you can anchor any where.

At $3\frac{1}{2}$ miles N.E. $\frac{1}{2}$ E. [N.N.E. $\frac{1}{2}$ E.] from St. Fiorenzo is the *Tower of Farinale*; from this tower the coast stretches irregularly 16 miles northward, to *Cape Bianco*, or the N.W. point of *Cape Corso*, already noticed. All the land between is high, and there are some little coves, and several watch-towers, but no anchorage. From *Cape Bianco*, $2\frac{1}{2}$ miles E.N.E. $\frac{1}{2}$ E. [N.E. $\frac{1}{2}$ E.] is the *Island Giraglia*, already described on page 86.

The *Punta Corna di Becca* lies a mile to the eastward of *Cape Bianca (White Cape)*; it is elevated, and within it are seen the lofty mountains of the interior. At rather more than a mile to the eastward of this point, and nearly on the meridian of the Isle *Giraglia* stands the *Tower of Tolare*, on the eastern side of which is a rivulet, which falls from the mountains. Two miles farther east is *Boccaggio Point*, the northernmost point of Corsica.

VII. THE ISLAND OF SARDINIA.

THE ISLAND OF SARDINIA (ISOLA DI SARDEGNA) is 46 leagues in length, from North to South, and its mean breadth is about 21 leagues. The interior is highly mountainous; the general direction of the mountains is from north to south, and the highest summits are commonly covered with snow. It is divided into two provinces, the *Capo di Sopra*, or *Sassari*, to the north, and the *Capo di Sotto*, or *Cagliari*,* to the south. The former is the most hilly, but both contain mountains, lakes, rivers, cascades, and other beautiful features of landscape, in all imaginable variety. The general elevation of the mountains is from 1,000 to 3,000 feet; but the *Peak of Limbarra*, in the N.E., is 3,686 feet; and that of *Genargentu*, half way down the island, toward the east, is 5,276 feet above the level of the sea. The chief rivers are the *Tirsi*, or *Oristano*, running to the west; the *Coguinis*, to the N.W.; and the *Flumendosa*, to the S.E. These, with their tributary streams, pervade great part of the island; and there are many more, of inferior consequence, which, on all sides, fall into the sea.

The forests, in the mountainous parts, are numerous and extensive, and many large tracts, capable of cultivation, are utterly neglected; and yet, says Captain Smyth, "Sardinia, geographically considered, is singularly favoured by its climate and position; and its resources in agriculture, mines, and fisheries, are sufficiently abundant to have elevated it to the greatest prosperity and opulence."

-Of the extensive and fruitful plains, the larger are termed *Campidani*, and the secondary, *Campi*. Large sandy or stony districts, called *Mucchie*, are estimated to amount to one-third of the island; a similar extent to the forests and pastures; and the remainder to corn-fields, vineyards, olive-grounds, orchards, and gardens, for the subsistence of a population of 480,000 persons. The mean temperature of the climate is about $60\frac{1}{2}$, the thermometer varying from 34° to 90 , but the weather is proverbially variable, as to heat and cold, though hail and thunder-storms seldom occur.

The morasses and low lands produce pernicious exhalations; and many tracts, screened from the winds by the high lands, exhale a poisonous *intemperie*, or *mal'aria*. The most fertile plains are toward the south, and produce fine wheat, of which much is exported, with barley, beans, lentiles, &c. The tall palm decorates the forests, and there are groves of wild olive-trees. Vines, with the orange, lemon, citron, fig, pomegranate, and the ordinary fruit-trees of Europe, are very fine and abundant. Peas, cabbages, and asparagus, grow wild in the greatest luxuriance. The mineral riches of the island were well known to the antients. At present lead is the most abundant of its ores. In

* Pronounced *Kal-yi-a-ri*.

the northern mountains are found porphyry, basalt, alabaster, marbles, cornelians, sardonyx, turquoises, amethysts, &c.

The most prevalent winds are the N.W. and the East, the first of which is the healthiest. The sea-breezes [*imbattu*] which usually blow in toward noon, are exceedingly refreshing during the heat of the day; they fall calm as the sun goes down, and are succeeded in the evening by the *rampinu*, or land-wind. N.E. winds bring heavy rains; and the east wind, or *bentu de soli*, (the coming of which is indicated by clouds gathering on the summits of the mountains,) is usually accompanied by very vivid lightning; and from its being loaded with vapours, becomes extremely disagreeable after a long continuance. The *maledetto levante*, a S.E. wind, complained of by the natives for its debilitating effect, is the scirocco of Sicily; while the north wind, from its opposite quality, is called the *serche*, or dry wind. The *intemperie* differs from the malaria of Italy, it being pernicious at all times, wherever it abounds, and strangers landing for a few hours only have been almost immediately carried off by its virulence; indeed, the very breathing of the air by a foreigner at night, or in the cool of the evening, is considered as certain a death in some parts as if he had swallowed some poisonous drug. Whilst the atmosphere is in this state, the natives never move abroad until an hour after sun-rise, and they hasten home before sun-set, carefully closing every door and window; or, if obliged to be out, hold a handkerchief before their mouth. The extreme heat of the day is also carefully avoided, for they are very apprehensive of the "*colpo di sole*," or stroke of the sun, attributing its frequency and fatal effects to the malignity of the *intemperie*. There exists, besides, a fear of the "*colpo d'aria*," from the change of temperature occasioned by the sun becoming suddenly overcast, or by abruptly moving out of the sunshine into the shade. Exposure to the evening dew is said to bring on a severe head-ache, called *micrania*, much dreaded as a fore-runner of *intemperie*.

Most of the people remove from the plains to the higher grounds on St. John's day in June, when the air begins to be unsafe, though it does not become very dangerous until August. Those who, from their circumstances, are obliged to remain, keep themselves well clad in thick woollens, to avert the ardent rays of the sun. Exertion, exposure to summer showers, and fatigue of every kind, are studiously avoided; and a spare, but good diet adopted, with cool acidulated drinks. Many Sards entertain a notion that the green figs of infected districts imbibe and evolve the deleterious principle of *intemperie*; it is, therefore, customary in the markets, to express the place of their growth on the baskets.

Pastoral habits have induced indolence, and these islanders have an utter dislike to manual industry, as well as to the sea. Not only all the trade, therefore, is carried on by strangers, but even the fish on their coasts, and in their harbours, is caught by Sicilians, Neapolitans, Tuscans, and Genoese. Soap, stationery, drugs, spices, glass, pottery, furniture, and every article of dress, are imported. Though possessing so much rich ore, iron and steel bars are also supplied from abroad.

Of the exports, the chief is wheat, though subject to a heavy duty. As compared with wheat, barley is of an inferior quality. The wine trade has become a profitable branch of commerce. Salt is an important article of export, but it is a royal monopoly. The bullocks of Sardinia are of a small size; the beef and pork are excellent; mutton tolerable. The woods and forests abound with stags and all sorts of game.

The fisheries have been very productive; but, as above-mentioned, they are almost entirely managed by strangers. There are *Tonnare*, or establishments for taking the tunny-fish, at the Saline, on the north coast, and several places on the west. The schole annually enters the Mediterranean early in the spring, skirts along the shores of Spain and France, then descending by Corsica, some escape through the Straits of Bonifacio, while the rest pursue their course toward the Black Sea, round the south end of Sardinia, but tarry there from April to July. Both the sword-fish and anchovy are now become scarce here; and the same may be said even of the sardines, formerly so abundant.

The chief towns are, *Cagliari*, the capital and chief emporium, on the south, having about 26,000 inhabitants: *Sassari*, inland, on the N.W., with upwards of 20,200: *Iglesias*, in the S.W., with 9,500: *Tempio*, inland, to the north, with 6,000. The coasts are defended by a line of stout towers, garrisoned by soldiers called *torrari*.

The NORTH COAST.—CAPE LONGO SARDO is the northernmost point of Sardinia, and its distance from the nearest point of Corsica is two leagues. It is a bold cliffy

cliffy head-land, with the rocks and islets of *Marmorata* on its eastern side. At two miles to the west of it is the round tower of *Port Vecchio*, or *Longo Sardo*; the latter an iron-bound inlet, with a sandy beach at the bottom of it, near which is a small mole: a new town, *Santa Teresa*, is rising here. The extremity of *Cape della Testa*, is at a league W.N.W. [*nearly West*] from the mouth of the inlet. This cape is a high granitic mountain, connected to Sardinia by a sandy isthmus, and having on its highest summit a deserted turret. On its western side is the small chapel of *Santa Reparata*. The turret on the summit stands in latitude $41^{\circ} 14' 28''$, and longitude $9^{\circ} 8' 15''$. It commands a fine view over the whole strait.

CAPE DELLA TESTA was the ancient *Erebanthium Promontorium*. Its western face is composed of strongly marked rugged cliffs, with several rocks above water at its base, but steep-to. On the north point is a cove, *Cala Spinosa*, and near it are some quarries, where fine granular stone may be obtained, and whence the columns were taken for the Pantheon at Rome.

From the extremity of *Cape della Testa* to *Monte Rossa*, a bold head-land of red granite, the bearing and distance are S.S.W. [$S. \frac{1}{2} W.$] $5\frac{1}{2}$ miles; and to Point *Vignola*, S.W. $\frac{1}{2}$ W. [$S.S.W. \frac{1}{2} W.$] $7\frac{1}{2}$ miles. At the foot of *Monte Rossa* is the *Isoletta*, a barren rock. On each side of the cape is a long tract of sandy land. Thence to the westward, an indented beach, with an islet off it, named *Canello*, extends to the little port of *Vignola*, whither coral boats repair for water and shelter, and lie tolerably secure near a round tower.

The space between *Sta. Reparata* and *Vignola* is a barren waste; but, at the back of *Vignola* is a fine valley, with beautiful wild olive-trees and vines, fertilized by a river meandering through it, the banks of which are literally covered with tortoises. Bounding these grounds are the precipitous crags of *Monte Cucuru*, commanding a great extent of coast.

From *Point Vignola*, a sterile iron-bound coast, of forbidding aspect, the land trends south-westward, $9\frac{1}{2}$ miles, to *Cape Monte Fava*; then follows a cove ending in the point and tower of *Monfornara*, off which lies a bare rock, *Isola Rossa*. Here a delicious plain opens to the view, with the *River Coguinias* winding through it, and forming a lake where it enters the sea, by the solitary chapel of *S. Pietro di Mare*. Inland, at the south part of the plain, stands *Castel Doria*, a well-built square tower, on an insulated mountain. Westward of this plain, the coast is broken by picturesque volcanic cliffs, on which, at the height of 300 feet, stands the fortified town, *Castel Sardo*, which occupies the summit of a steep rocky pinnacle immediately over the sea. Both the town-wall and the dwellings are built of lava, and there is a citadel on a crag to the S.W. The streets are partly cut in steps, and partly on the flat face of the rock, every where slippery and dangerous. The inhabitants are very poor, and of a bad unsocial character. Between *Longo Sardo* and this place, in a distance of more than 30 miles, a few huts constitute the only habitations on the coast.

At the foot of the cliffs, on each side of *Castel Sardo*, are little bays, forming anchorages for boats. A rivulet falls into that on the S.W. The *Sardo Rock*, a dangerous shoal, lies at about six miles N.N.E. $\frac{1}{2}$ E. [$N. \frac{1}{2} E.$] from the high steeple of *Castel Sardo*, with the *Isle Rossa*, near *Cape Monte Fava*, bearing E. by S. [$E. \frac{1}{2} N.$] $6\frac{1}{2}$ miles. It has 4 fathoms on it, and from 20 to 30 around. Within a mile of *Castel Sardo* are two other rocks, with 7 and 8 fathoms over them, which produce over-falls during northerly winds.

CASTEL SARDO WESTWARD.—To the westward of *Castel Sardo* the coast trends W. $\frac{1}{4}$ S. [$W.S.W.$] 4 miles, to *Point Canemato*, and is bordered with sunken rocks, and some above water. The coast hence westward becomes low, and displays an inland town, *Oilo*, which stands on a mountain upwards of 2,000 feet in height. Between this town and the shore are the villages of *Sorso* and *Sennori*, the inhabitants of which cultivate tobacco, the vine, and corn, in the valley of *Logulentu*.

PORT TORRES, the ancient *Turris Lybisonis*, lies at the distance of $11\frac{1}{2}$ miles W. $\frac{1}{2}$ N. [$W.N.W. \frac{1}{2} W.$] from *Point Canemato*. This place is a small haven of two moles, defended by an octagon tower, which stands in lat. $40^{\circ} 50' 31''$, long. $8^{\circ} 22' 51''$ E. It will admit a few small vessels, but those of burthen must lie in the road, nearly a mile outside, where the anchorage is pretty good. At a short distance, southward of the town, on a gentle acclivity, is the church and hamlet of *St. Gavino*; and, at 9 miles

9 miles inland, is the city of *Sassari*, with its twenty-four churches. There are more Roman vestiges hereabout than in any other part of Sardinia.

From *Porto Torres* the coast trends to the westward, and thence to the north. At two leagues beyond the port is the *Lake Pilla*; beyond which, to the northward, are the lagoons where salt was formerly made, and where stand the tower and tonnara of *Salinas*. Here is an excellent boat-cove, frequented by the gentry of *Sassari*, at the time of the *Mattanza*, or net-drawing. A great tract of land at the back of the beach, between *Porto-Torres* and this place, is literally a desert, bounded inland by the *Nurra Mountains*.

CAPE FALCON, antient *Gorditanum*, is the northern extremity of the district called the *Nurra*. It has one tower on its highest summit, and a second stands on an islet at its base, named *Pelosa*. Sardinia is here divided from the island *Asinara* by narrow shallow straits, between which lies the low flat isle of *Prana* or *Vana*, which has a tower on its north coast. In these straits may be seen innumerable quantities of the little *Nautili*, floating on the surface of the water.

ASINARA [ant. *Hercules Insula*] is an island of the most irregular form, 10 miles in length from N.E. to S.W. It is wholly mountainous, nearly intersected, on one part, by two ravines, and abounds in tortoises of the largest and best kind, goats, &c. On the hills wild olive-trees, and the vales good pasturage. The approach from seaward is bold on all sides. It has several good boat coves; and, on the eastern side, is the convenient anchorage of *Trabucato*, for vessels of any size, off the ruins of a deserted village and tonnara. On *Trabucato Point*, eastward of this anchorage, is a round tower, erected for the defence of the fishery, and of the *Cala Levante*, a sandy cove, on the east of it. The tower stands in latitude $41^{\circ} 4' 4''$, and east longitude $8^{\circ} 18' 53''$.

The north and west coasts of *Asinara* are high and steep. The most elevated summit, *Monte Scommunica*, is nearly 1,500 feet above the sea. From the northernmost extremity, *Point Caprara*, Cape della Testa, at the entrance of the Strait of Bonifacio, bears E. $\frac{1}{4}$ S. [E. by N.] 38 miles.

WESTERN COAST.—The western coast of the *NURRA*, or N.W. district of Sardinia, is very steep; there being from 30 to 50 fathoms of water within a mile of the shore, and no bottom at 500 or 600 fathoms a little farther out. *Cape Falcon*, already noticed, has a white rocky line, trending south-westward to *Point Coscia di Donna*, a distance of $2\frac{1}{2}$ miles; and thence, to an equal distance south-eastward, along the *Costa Redondada*, between which and the tonnara of the *Salinas* is a flat plain. At a mile farther, southward, is a high rock, *Isola de' Porri*, or Isle of Leeks, whence the land gradually rises to *Cape Negretto*, a tabled cliff, with a cove, *Acqua di Cervo*, at its base.

A bold coast continues to *Cape Argentaro*, in latitude $40^{\circ} 45'$. This cape is the extremity of a rocky mountain upwards of 2,000 feet in height, covered with brush-wood and wild olive-trees; beyond it, on the south, is a bay with low shores, over which the city of *Sassari* may be seen from the offing. On the N.E. side of the bay is a cove for boats, defended by the *Rotunda*, a tower on a gentle hill, flanked by another, that of *Spanga*.

At a league farther south, is a small spot called *Porticiolo*, defended by a tower. This is followed by the bold and picturesque cliffs of *Monte Ghiscera*, which terminate at *Cape Caccia*, (ant. *Hermæum prom.*) a noble head-land, upwards of 500 feet in height. Between the two, on the highest summit of *Monte Timidona*, is the *Torre della Penna*, much shattered by lightning; and off this part of the coast are two insulated steep rocks, of which the southern one, *Foradada*, is perforated. Ships may round *Cape Caccia* at any distance, it being very bold, and then enter the excellent harbour of *Porto Conte*. The latitude of *Cape Caccia* is $40^{\circ} 33\frac{1}{2}'$, and its longitude $8^{\circ} 5' E$.

PORTO CONTE, which is formed on the west by the elevated land which is terminated by *Cape Caccia*, is two miles broad and $3\frac{1}{2}$ miles in depth. This harbour, though exposed to the S.W. winds, is perfectly safe for frigates, by bringing up in from 6 to 10 fathoms. Smaller vessels find still better shelter by running to the N.E. of a martello tower, *Torre Nuova*, and anchoring in 3 or 4 fathoms, on a bottom of sand and shells over muddy clay. The *Torre Nuova*, which is on the eastern side, is the only one in the harbour that has a garrison, nor are there any other inhabitants; but refreshments and wood may be had from *Alghero*, 7 miles to the eastward, and water from some pools and wells

wells at the head of the bay. The first tower inside Cape Caccia is called *Bollo*, and close to it is an excellent cove for landing.*

To the eastward of *Porto Conte*, is *Monte d'Oglia*, or *Olio*, a conical mountain nearly 1,400 feet high, and under which is a rivulet that flows nearly all the year, whence water for shipping may be obtained. From the head of the harbour, the ground of which is foul, a fertile plain extends to Portociolo and the Nurra Mountains, across which, in winter, N.W. winds blow with great violence.

Following the coast from *Porto Conte*, rocky cliffs are seen extending eastward, $2\frac{1}{2}$ miles, to *Point Galera*. The fissures of these cliffs afford shelter to thousands of wild pigeons. Beyond *Point Galera*, and to the southward of *Monte d'Oglia*, is a cove defended by a round tower, and having a lazaretto for quarantines of observation. Farther on, the coast forms a bay, with the *Lake Cagla*, abounding in excellent fish. The adjacent grounds are covered with the *palmizzu*, or fan-palm, of which so much use is made, as an article of food, that it is termed the "*manna of Alghero*."

ALGHERO.—The city of Alghero bears from the extremity of Cape Caccia S.E. by E. $\frac{1}{2}$ E. [E. $\frac{1}{4}$ S.] 8 miles; and from *Point Galera*, S.E. $\frac{3}{4}$ E. [E.S.E. $\frac{1}{2}$ E.] 4 miles. It is very pleasantly situated, on a low rocky point, jutting out from a sandy beach, and defended by bastions and towers. It is entered by a gate at the mole. The cathedral is a conspicuous and spacious edifice. The streets, though narrow, are clean and paved, and the inhabitants are esteemed as more agreeable than those generally in the other cities of Sardinia. There is a tolerable market for provisions, and several fountains of pure water outside the town, but within the walls the dependence is upon cisterns only. The country around is well cultivated, and interspersed with large gardens and orchards. Wines are the chief products. Butter, cheese, vegetables, and fruits of most kinds, are plentiful, and tobacco is extensively cultivated here.

From *Alghero*, the coast trends South [S. by E. $\frac{3}{4}$ E.] 4 miles, to the Point and Tower of *Poglinu*; and the intermediate land presents a range of gentle hills, planted with vineyards, and backed by the mountains. *Point Poglina* has a deserted turret on its acclivity, and off its base is a bare rock frequented by sea-birds. Eastward of it is a rocky spot resorted to by the Neapolitan coral fishers, who annually commence their operations in the spring, and terminate them on the festival of St. Rosario, the first Sunday in October.

From *Poglina*, *Cape Marargiu* bears S. $\frac{1}{2}$ W. [S. by E. $\frac{1}{4}$ E.] $9\frac{1}{2}$ miles. The coast between is concave, steep, and tabled, with partial patches of corn, and gradually rises eastward to the high summits of *Monte Minerva*, the woody ravines of which abound with wild hogs, deer, and mufions.† Off *Marargiu* is an islet of moderate height, and the coast south-eastward, for more than a league, is composed of cliffs, extending to *Point Mora*, on which the ruined tower of *Argentina* may be seen.

BOSA.—At two miles to the south-eastward of *Point Mora*, is the islet and tower of *Rossa*, at the entrance of the River *Termo* [ant. *Temus*]. The islet is fortified with a round tower, which stands in latitude $40^{\circ} 16' 40''$, longitude $8^{\circ} 25' 31''$. At a mile and a half eastward from this, on the north bank of the River *Termo*, is the town and bridge of *Bosa*; the appearance of which, with the various churches and convents, from the offing, is very pleasing. The town is tolerably clean, several streets are paved, but it stands in a close valley, on the muddy banks of a sluggish stream, and in summer is fatally unhealthy.

Between the islet *Rossa*, and the shore, small vessels lie in tolerable security; but boats and small craft take shelter inside the river, in a berth where fine fish are easily taken.

* Nearly opposite *Foradada*, above-mentioned, is an extensive and magnificent grotto called *Antro di Nettuno*. Near the *Torre Bollo*, on the brow of a hill, is a very singular cavern, called the *Tragonaja*. Both are described by Captain Smyth, in his copious and accurate volume, entitled "*Sketch of the present state of the Island of Sardinia*," a work to which we are most especially indebted for the description of the coast.

† The *Mufion*, or *Mufon*, (Greek *Ophion*), is a ruminating animal, frequenting only the highest and most secluded woods; where, from its timidity and fleetness, it is with difficulty shot. The form of the head, ears, legs, and hoof, identify the mufion with the sheep, although in size it is rather larger, and clothed with hair instead of wool. See Capt. Smyth's "*Sardinia*," p. 120.

At about a mile to the southward of the Termo, or Bosa River, is a place called *Pietra Niedda*, whence timber is exported to Toulon and Genoa. Half a league southward from *Pietra Niedda*, is the small town called *Tres Nuraghes*, the vicinity of which is noted for its grain, cattle, honey, cherries, and other fruits, and particularly for its new milk cheeses, "*frescas*," the best in the kingdom. The coast continues to trend southward, and presents the towers of *Colombargia* and *Iscala Ruia*, or Red Landing, between which are four rocky islets. The coast beyond the tower of *Iscala Ruia* presents tabled cliffs of compact lava, and continues along the base of *Monte Ferru*, a noble elevation of 2,796 feet.

CAPE MANNU, the southern point of the Bay of Bosa, lies at the distance of six leagues S. by W. $\frac{1}{4}$ W. [South] from Cape Marargiu, the north point. N.E. from the cape is the low islet *Pelosa*, with ruins on it, and surrounded by a shoal of sand and rocks. Cape Mannu has a white round tower, on a tabled cliff of moderate height, which declines to the eastward, so as to give it the appearance of a gunner's quoin. There are four other towers between this and *Iscala Ruia*. South of the cape, the sandy cove of *Inchiudine*, affords anchorage with off-shore winds, in 8 or 10 fathoms. Here are salterns, and much salt is exported.

At a league from Point Mora, the S.W. extremity of Cape Mannu, lie the flat islet and rocks called *Mal di Ventre*. The islet is triangular, and shelves to the N.E. and S.W. At two leagues S.S.W. of *Mal di Ventre*, is a small black rock, *Coscia di Donna*, having deep water close to it, excepting a reef at the N.E. end. The distance between these rocks and the coast is from 4 to 5 miles; the channel is perfectly safe for the largest ships, and the water deep, being from 20 to 13 fathoms.

CAPE ST. MARCO, a tongue of land, having a tower on a conical hill, and another on its eastern side, forms the north point of the entrance of ORISTANO BAY. The cape lies in latitude $39^{\circ} 51'$, and is 11 miles to the southward of Cape Mannu.

ORISTANO BAY.—This is the largest and best bay on the Western coast of Sardinia, but it is open to westerly winds. *Cape St. Marco* on the north, and *Cape Frasca*, on the south, are its outer points; and the distance between these is five miles, with 10 to 15 fathoms of water. There are reefs tailing out a little way from each point. In the bay, ships have excellent anchorage during off-shore winds; but westerly winds blow full in, producing a great sea and surf; nevertheless, two or three vessels may lie securely, in 6 or 7 fathoms, by rounding Cape St. Marco, and bringing up to the eastward of the two towers; or, if running from a southerly gale, by standing inside *La Frasca* to a similar depth. In either case it is, however, requisite to remember, that reefs surround each point, as above-mentioned.

The shore of the Bay is formed by a beach bounding a succession of large lakes, and the River Tirsi [ant. *Thyrsus*] falls into the N.E. part. Directly off the mouth of the river are three shoals, but within them are from 4 to 6 fathoms of water. The eastern shore is also shoal. Here wood is obtained with difficulty; water in the summer is scarce; the air unhealthy: but cattle and refreshments may be obtained in any quantity, by embarking them at the *Torre Grande*, on the north shore, which is 5 miles to the north-eastward of Cape Marco, in latitude $39^{\circ} 53' 55''$, long. $8^{\circ} 28' 40''$ E.

The town of ORISTANO [ant. *Aureum Stagnum*] stands on a very unhealthy plain, $3\frac{1}{2}$ miles true East from the *Torre Grande*. It is a busy commercial place, containing about 4,500 inhabitants; has a cathedral and several other churches. In winter and spring the country here has a smiling aspect; but, after June, the whole is a sun-burnt dreary waste, and the atmosphere pestilential.

Within the north shore of the Bay is an extensive lake, *Cabras*, having on its eastern shore a village of the same name, surrounded by gardens, orchards, and olive plantations. The lake abounds with excellent fish, but they are not eaten in summer, being then supposed to partake of the putridity of the stagnant waters. On the eastern side of the bay is the Campo, or Plain of S. Anna, one of the richest plains in Sardinia, and in the lakes on this side great quantities of fish and aquatic fowls are taken.

Cape La Frasca, the south point of Oristano Bay, is long, flat, of moderate height, and falls abruptly on the northern side. On its eastern side is a tower, but it is not to be seen from seaward. From the cape, the coast southward continues flat, and of the same height for about two miles, where it is terminated by a point, with a high pinnacle off it, forming a small cove called *Porto Naviri*. Farther south is the point and tower of

of *Frumentargiu*, and a detached rock, beyond which is a sandy cove, with a royal tonnara, chapel, and battery. The shore thence is enriched with farms and cultivated grounds, backed by mountains, which are again surmounted by the rugged ridges of *Arcuentu*, one peak of which is 2,315 feet above the level of the sea. This peak, forming a distinguishing mark, is called the *Finger of Oristano*; it is remarkable from having strong breezes prevailing around it, and stands in latitude $39^{\circ} 35'$, longitude $8^{\circ} 31' E$.

The coast hence southward, to the distance of about 7 leagues, is comparatively deserted, and assumes an appearance of life during the fishing season only. The promontory named *Cape Pecora*, is 19 miles southward from Cape la Frasca, and has a tower upon it. Five miles farther south is a cove, *Cala Domestica*, defended by a tower; and, at 7 miles lower is the fishing village of *Paglia*, defended by a round tower on a low point. The N.E. winds here rush with incredible violence from the mountains, and are extremely injurious to boats and small craft. The chief place of this district is *Iglesias*, situate above a rich and salubrious plain, at about two leagues inland from the coast.*

From *Porto Paglia* an elevated coast trends nearly true S.W. to *Cape Altano*, where it commences a S.E. direction. Off Cape Altano lie three little rugged islets, named the *Porri Rocks*. By rounding these rocks, passing a small cove, *Paglietto*, and then keeping about a mile to the south, you arrive at the tonnara and fishing village of *Scus*, a poor place, defended by an excellent tower on a commanding point, with *Cadena*, an insulated rock to the W.S.W. of it.

ISOLA de S. PIETRO, or Sr. PETER'S ISLAND.—The N.E. end of this island, [ant. *Hierakon*] lies at the distance of $3\frac{1}{2}$ miles to the south-westward of Cape Altano; and its northern shore, a line of steep cliffs, continues nearly in the same direction to the distance of five miles. The island is of a triangular form, of nearly an equal extent each way. The western side is high, and off its extremity is an islet named the *Gallo Rock*, about 30 feet high, with a passage between it and the main. On the eastern side is the small town *Carloforte*, and several salterns. On this side is a good road, well sheltered from westerly and N.W. winds.

Off the N.E. point of S. Pietro, is the islet *Piana*, and several rocks; and, at two miles from its S.E. coast, is the nearest part of the *Island of Sant' Antioco*: these islands thus form a spacious harbour, which affords secure anchorage with every wind, but its access is rendered difficult by a number of irregular shoals. Nevertheless, a stranger may easily enter by the southern channel, and anchor in 6 or 7 fathoms between S. Antioco and Carloforte, where smooth water will be found during gales from the N.W. If coming in from the northward, ships must borrow on *Piana*, in order to avoid a dangerous shoal in mid-channel, called *Secca de Marmi*, from a Swedish ship, laden with marbles, which was lost on it about a century ago. Fresh water may be had from wells and public cisterns, on the shore of the island, and plenty of wood, with refreshments, from the eastern shore.†

ISOLA SANT' ANTONIO.—This island, lying to the south-eastward of S. Pietro, is 9 miles long from north to south, and it forms the western side of the Bay of Palma. It was the *Plumbaria* and *Enosis* of antiquity. The surface is diversified with hills and valleys, and is noted for the geologic and mineral products which it incloses. On the northernmost extremity of the island is the *Cala Seta*, where there is a tower and village, in a very unhealthy situation, and a rock at a short distance from shore. The western coast, trending nearly north and south, is rocky, iron-bound, and generally bold-to. *Point Speroné*, the S.W. extremity of the island, is in latitude $38^{\circ} 57\frac{1}{2}'$; and

* In the neighbourhood of *Iglesias*, is the singular cavern named the *Grotta di St. Giovanni*, or Grotto of St. John. See Capt. Smyth's "*Sardinia*," page 304.

† Capt. Smyth has given a very pleasing description of this island and its inhabitants, from which it appears that the latter are a people very superior to those of the opposite coast. The more elevated part of the island is to the northward, this being chiefly of rocky hills, with intervening patches of cultivated land, and offering a fine field for the mineralogist. The town, defended by a castle, is modern, and is moreover protected by the redoubt of *Vittorio*, a substantial edifice mounting eight guns, with a circular column on its summit, and standing in latitude $39^{\circ} 8' 28''$, and long. $8^{\circ} 17' 28''$.

On the Isle *Piana*, off the N.E. point, is a church, and one of the finest tonnars in the kingdom.

at two miles to the S.E. of it is a quoin-shaped islet, named *La Vacca* (the Cow,) with a smaller, *Vitelli*, off its north end.

From *Point Speroné* the coast trends East, [nearly *E.N.E.*] two miles, to the point and tower of *Cannai*; and, at half a mile from it is a reef of three rocks, 15 feet below the surface, from which *Cannai* tower bears N.E. $\frac{1}{2}$ N. [*N. 24° E.*] The channel is otherwise clear of danger, and has from 13 to 20 fathoms of water.

IL TORO (the Bull; ant. *Boaria*), a singular columnar rock, stands at the distance of $5\frac{1}{2}$ miles, nearly true South, from *Point Speroné*. It is 500 or 600 feet in height, with abrupt sides, of difficult access, and friable materials. The summit is covered with a thick-set brushwood, which is a favorite resort of vast numbers of rabbits. Captain Smyth states its latitude to be $38^{\circ} 51' 58''$, and its longitude $8^{\circ} 22' 44''$ E., while the magnetic variation was found to be $17^{\circ} 20' 30''$ W. The sea around it is very deep, and between it and *Vacca* are from 30 to 40 fathoms of water.*

BAY OF PALMA.—This is a very spacious bay, in which the ground is excellent, and the soundings regular, decreasing from 20 to 5 fathoms. Its entrance is open to southerly winds, yet it affords commodious anchorage for fleets in the violent S.W., West, and N.W., gales of winter, and supplies may here with facility be obtained for any number of ships. The best ground is on the western side, in 7 or 8 fathoms.

From *Cannai* Point, the S.W. point of the bay, the coast, rocky and steep, trends nearly true North, between 3 and 4 miles. The inhabitants frequently amuse themselves by taking wild pigeons in the grottoes of this coast, by means of nets and boats. At two miles to the northward of *Cannai* Point, is a small indent of the coast called *Maldrosia*, in which some fresh water may occasionally be obtained. The coast in the N.W. and North part of the bay is low and broken, forming islets connected at low water; and the *Bogaza*, or Strait between *S. Antioco* and the main is entirely shoal. The town of *St. Antioco*, with its old castle, which may be seen on the western shore, contains about 1,800 inhabitants.

The Eastern side of the Bay is bounded by the main-land of the district of *Sulcis*, a country richly cultivated, and abounding in grain, pulse, and maize, oranges, lemons, cherries, apples, and other fruits. The cattle, also, are highly esteemed, as well as the horses, sheep, and swine. Great quantities of cheese are made here. In the N.W. extremity of the Bay is a sandy bight called *Gradano*, where small craft lie in perfect security.

On the S.E. side of the Bay is an insulated hill, extending to *Point Sarri*, a steep elevation of 130 feet. Beyond this, on the East, is *Port Pino*, a large sheet of water and profitable fishery. The coast hence forms a slender bay, of $3\frac{1}{2}$ miles, the extremity of which is *Point Piombo*, a bare sloping projection, with a round tower on a height, but below its summit. There is a small shoal, with 9 feet over it, at about one-quarter of a mile westward from the point, but with 12 or 14 fathoms close to.

CAPE TEULADA, [ant. *Tegulare*], a singularly bold headland, nearly 900 feet high, forms the eastern extremity of the Bay of Palma. The southern point of this cape bears from the *Toro*, or Bull Rock, nearly E.S.E. [*E. $\frac{1}{2}$ S.*] 11 miles; and from the *Vacca*, or Cow, S.E. [*S.E. by E. $\frac{1}{2}$ E.*] 10 miles. It has a bifid, or cleft summit, and declines on the north to a sandy isthmus, on which is a lake that deposits very fine salt. This is the southernmost land in Sardinia, and its outer point lies in latitude $38^{\circ} 51\frac{1}{2}'$, longitude $8^{\circ} 37'$ E. The small bay or cove on the west of this cape is the *Cala Piombo*, and that on the east, *Cala Pilastro*.

* In 1796, it was reported that the British cutter *Fox* had struck on a rock lying between 4 and 5 leagues South from *Toro*. It was in the day time, the water smooth, weather fine, the sea did not break, and she received no damage. On the 1st of November, in the same year, the *Chichester* sailed from *Port Mahon* for *Corfu*; on the 2nd she had a very strong breeze; but night coming on before they had made Sardinia, the ship was brought-to, fearing the danger: at half-past six, a.m. of the 3rd, the sea was seen breaking very high upon it, and it was judged to lie about South (by compass) from the *Toro*, 4 or 5 leagues.

Captain Smyth has declared, that all his researches to find such a rock were ineffectual; and that the coral-fishers had no idea that any such danger existed. The depths of water, in the part where it was supposed to exist, vary from 80 to 100 fathoms.

BAY

BAY OF TEULADA.—The Bay of Teulada is the Bay formed by Cape Teulada on the west, and Cape Malfatan, a narrow neck of land, on the east. The bearing and distance between these capes are, E. $\frac{1}{2}$ S. [*E. $\frac{1}{2}$ N.*] 8 miles. In the middle of the bay, at half a mile from shore, is a flat and stony isle, presenting rocks of a red colour, and forming a useful harbour. This is called the *Isola Rossa*, and is resorted to by coasting vessels. At half a league westward of this is a rocky shoal of 9 feet, near a cove called *Scovo*. At the head of the bay is a shallow beach, bounding a lake that communicates with the sea, and is entered by the flat boats of the country. The Tower *Budello* stands on its western point.*

On the Harbour *Rossa*, the following remarks have been made and communicated by a British officer:

"This place takes its name from the little island by which the harbour is formed. It is not regularly inhabited. Seven or eight vessels may anchor in the harbour at a time, perfectly safe from all winds. You may enter either by the east or west end of the island; but do not run in with too much sail, as you must anchor about a cable's length inside the island; and I would recommend those who anchor here to steady their vessels with a kedge, or a hawser, to the shore, as the wind is variable in the night-time, though it blows strong in the offing. In the western passage you have from 6 or 7 to 9 fathoms; keep nearest to the island. In the eastern passage you have from 18 to 20 fathoms, grassy bottom, good holding ground. If you should be driven to the eastward of the island, and it falls calm, with a swell, anchor in time, as the bottom is bad, and the shore dangerous. At about $2\frac{1}{2}$ miles to the N.E. of this island is another small island, with a number of sunken rocks around it, having only 6, 8, and 10, feet of water on them. I have sounded about it, and found it quite dangerous for any vessel to approach near it. Water may be had at *Rossa*, in a little river, [to the N.E.,] but no other supplies; you can land, but must first go to the tower which guards the bay, [on the north side,] and the officer will send a guard with you, whilst you procure water. You cannot go to the tower, or receive *pratique*, unless you have come from some other part of the island. It is dangerous to land without a guard from the tower, as the inhabitants, mistaking you for Turks, may otherwise happen to shoot you from the rocks." (1816.)

PORT Malfatano, or Malfatan, [ant. *Portus Herculis*,] is a snug harbour, formed on the east by Cape Malfatan, on which is a watch-tower. It is about a mile and a half deep, open to the south, with the two islets *Terredo* at the entrance. Its soundings regularly shoalen from 10 to 2 fathoms, and terminate at a sandy beach. There is good anchorage near the centre in 6 fathoms. This is a useful place of retreat with strong westerly winds.

CAPE SPARTIVENTO.—From the point of Cape Malfatan, that of Cape Spartivento bears S.E. by E. $\frac{1}{2}$ E. [*E. by S.*] $2\frac{1}{2}$ miles. The coast of Spartivento is the base of rugged granitic mountains; and there stands, on one of the most elevated summits, at an elevation of more than 1,000 feet, some Cyclopean vestiges, now called the *Giant's Tower*. These remains, situate amongst bare cliffs, wild ravines, and desolate grounds, appear, says Captain Smyth, like a ruin of art amidst a ruin of nature, and they impart to the scene inexpressible grandeur. To the north, the mountains of *Capu Terra* form the great barrier, and finely contrast with the wide expanse of sea to the southward.

On the west of Cape Spartivento lie a cluster of rocks called the *Faraglioni*, and eastward of the cape are the cove and isle *Giudeo*. Here a low beachy shore, with lagoons, extends to the port and point of *Chia*, on which is a tower, $2\frac{1}{2}$ miles eastward of Spartivento. The coast now trends, for 9 miles, in a true N.E. direction, and is a gravelly beach, backed by hills, in the woody clefts of which there is abundance of game. The *Torre Ostia* stands on the shore at $5\frac{1}{2}$ miles from that of *Chia*; and, at $2\frac{1}{2}$ miles farther, is that of *St. Efficus*.

* Captain Smyth adds, "Attracted by the fertility of the soil, a little colony of Sicilians were induced, a few years ago, to settle in this neighbourhood; but the *intemperie*, consequent on the very fertility which had so allured them, carried off the greater part. The survivors were happy to escape, with the loss of all their exertions in clearing the ground, building habitations, and other labour."

The *Cape of St. Efficus* is a black conical crag, connected to the main by a low beach strewn with ruins. At a mile N.E. from the point is the steep islet and round tower of *St. Macario*, lying rather more than a furlong from shore, and forming a narrow channel. At a mile inland, N.W. from this place, on an insalubrious plain, is the town of *Pula*, on the site of the antient *Nora*.

GULF of CAGLIARI.—The *Bay* (improperly called *Gulf*) of *Cagliari* extends from *Pula* on the west, to *Cape Carbonara* on the east, a distance of about 24 miles, and about 12 in depth, with good anchorage all over it, after obtaining soundings.

From the Isle of *St. Macario*, above noticed, the Port of *Cagliari* bears N.E. by N. [*N. by E. $\frac{1}{2}$ E.*] $12\frac{1}{2}$ miles; *Cape St. Elias*, a promontory in the middle of the bay, N.E. [*N.N.E. $\frac{1}{2}$ E.*] 12 miles; and *Cape Carbonara* E. $\frac{1}{2}$ S. [*E. by N.*] $23\frac{1}{2}$ miles.

From the port of *Pula* the coast trends in the direction of *Cagliari*, $3\frac{1}{2}$ miles, to the *Torre Saorra*. The tower of *St. Macario* protects the roadstead of *Pula*. Between the isle and a point to the northward, whereon the *Torre del Diavolo* is curiously built up against a hilly peninsula, vessels usually anchor for the purpose of watering, taking a berth in 7 or 8 fathoms, at about a mile from shore. Passing the rocky cliffs on which stands the *Torre del Diavolo*, we coast by the low point of *Saorro*, from which point a sandy beach trends along by the towers of *Mezzo*, *Orri*, *Su Loi*, *La Maddalena*, and the *Scaffa*, northeastward to the *River di S. Agostino* and the mole of *Cagliari*. The whole of this narrow part is edged with a shallow bank extending some distance from shore.

CAGLIARI.—The *Stagno di Cagliari*, a considerable lake and excellent fishery, extends to the West and N.W. of *Cagliari*. The city stands on the side of a hill, and commands a view of the whole bay. Its appearance has a fine effect from the sea, but this is dissolved on landing, although there are thirty churches and many public buildings. The *Castellu*, or castle, a triangular space, walled round, occupies the summit of a hill 400 feet above the beach, and has a citadel on the northern side. In the castle are the vice-regal palace, the cathedral, the university, and the public seminaries. That portion of the town called the *Marina* extends down the west face of the hill from the castle to the sea. Opposite to the *Marina* gate is the mole of the *Pratique* office, and there is a commodious *Darsena*, or pier-harbour, at the south angle of the town-wall, which may contain 15 or 16 vessels. The situation of the mole-head battery, as determined by *Captain Smyth*, is lat. $39^{\circ} 12' 13''$, long. $9^{\circ} 6' 44''$ E.

In the bay, before the town, shipping of every description may ride securely. They usually lie about a mile S.W. from the mole, in 6 or 8 fathoms, on an excellent muddy bottom. The land-winds are here the most frequent and violent, especially those from North and N.W., which predominate nearly two-thirds of the year. From seaward the wind never blows home.

Provisions of all kinds are to be obtained at reasonable prices, but water is so scarce as to be sold at the doors of the houses. The castle is partly supplied from wells of extraordinary depth, by the constant labour of a number of men and horses, and partly from cisterns. Strangers must either go or send for water to *Pula*. The flat-bottomed boats of the bay make expeditious passages to and from that place, and may be hired on reasonable terms.

CAPE ST. ELIAS, a rocky point with white cliffs, about 250 feet high, divides the Bays of *Cagliari* and *Quartu*. The lazaretto, a respectable establishment, with a good mole to land at, but with very shallow water off it, is situate under the cape on the west. On the west point of the cape is a high building within a battery, originally intended for a lighthouse, but used only as a signal-tower, and named *Torre di Cala Mosea*. A redoubt, with square bastions, on the summit of the hill above, commands this cape and the valley below it. To the westward of the signal-tower is a round rugged rock, about 10 or 12 feet above the level of the sea, around which there is good fishing.

The BAY of *QUARTU*, extending to the east from *Cape St. Elias*, is bounded by a fine sandy beach, with round towers of defence upon it; but the space between the sea and villages consists almost entirely of lakes and salterns. The principal object here, on the *Campidano* or Plain, is the large village of *Quartu*. The bay is terminated on the east by a point, on which stands the *Torre de Foxi*, near which a rivulet disembogues that irrigates a fertile valley, which produces some of the finest fruits in the island, particularly figs and grapes.

To the south-eastward of *Point Foxi* the land again increases in height, and the interior

terior rises into high mountains. Towers are erected on all the commanding points. At two miles beyond Point Foxi the *River Flumini* falls into the sea. At 13 miles S.E. by E. [*E.S.E. $\frac{1}{2}$ E.*] from Cape St. Elias is *Cape Boi*, a moderately high bluff point; and, at half a league eastward of this lie the *Piscatelli*, a cluster of three low rocks near the shore.

CAPE CARBONARA is nearly 5 miles to the south-eastward from Cape Boi. The tower of Carbonara stands on a steep pinnacle, and commands the Bays of Campo Lungo on the west and Grugno on the east. Campo Lungo is also defended by a small castle, *Fortezza Vecchia*, irregularly built on a low rock. At a quarter of a mile from the cape is the *Ile Cavoli*, [ant. *Ficaria*,] half a mile in extent, noted for its wild cabages, and surmounted by a ruinous turret.

EASTERN COAST.—At the distance of $5\frac{1}{2}$ miles E.N.E. [*N.E. $\frac{1}{2}$ E.*] from Cavoli, and at a mile and three-quarters from shore are the *Isles of Serpentina*, [ant. *Belarides*,] of which the southern or largest is a long flat mass of granite, with steep sides, and a tower occupied by six soldiers. From this tower the next promontory to the northward is Cape Ferrato, bearing N.N.E. $\frac{1}{2}$ E. [*N. by E.*] $10\frac{1}{2}$ miles. The coast between is indented with several sandy coves, and may safely be approached. In the interior are the high mountains of *Budui*, and seven rugged peaks, called the *Sette Fratelli*, (Seven Brothers,) which are nearly 2300 feet above the sea, form an excellent mark for strangers. These peaks are nearly on the parallel of, and 10 miles inland from, Cape Ferrato.

CAPE FERRATO is a rugged white point, 70 or 80 feet in height, and has a guard-house on a remarkable peaked hill about a mile to the westward. From the cape the coast trends north-westward and thence more northerly to *Corallo Point*, which bears from the extremity of the cape nearly N.N.E. [*N. $\frac{1}{2}$ E.*] 10 miles. It has, all along, a sandy beach. At 5 miles from Cape Ferrato is the *Torre Xalinas*, two miles inland from which are the church and hamlet of *St. Priamu*, whence a stream runs towards the sea and terminates in a lake where quantities of fine fish are taken and sent to the market of Cagliari. The *River Flumendosa* falls into the sea at a mile to the southward from Corallo Point. In the summer season vessels anchor off the mouth of this river and receive oranges, lemons, cheese, pulse, grain, and wood, for Cagliari.

To the northward of the tower of Corallo is an elevated range, named *Monte Rosso*, extending nearly true North to Cape St. Lorenzo, which is 4 miles from Corallo Point. The tower of Arubil stands near the sea on the S.E. peak of Cape Rosso. Now follows a sandy beach, extending to the *Torre Murtas*, which is 4 miles from Cape St. Lorenzo. It appears that the *intemperie* has depopulated the whole district.

The *Chirra*, a cluster of rocks, lies at a mile from shore, and nearly two miles South [*S. by E. $\frac{3}{4}$ E.*] from Murtas Point. They are 30 or 40 feet high above the water, bold- to on all sides, and lie in latitude $39^{\circ} 33' 38''$, long. $9^{\circ} 41' 30''$ E. Variation $18^{\circ} 20'$ W.

Point Palmeri, to the northward of the tower of Murtas, is high and has a broad cliffy front. The coast hence trends nearly true North to the rugged headland named *Sferra Cavallo*, in a distance of 8 miles. At a league to the southward of Sferra Cavallo is the redoubt of *S. Gio di Sallara*, at the back of which is the extensive but unwholesome plain of *Sarrabus*.

The shore for about $3\frac{1}{2}$ miles to the northward of Sferra Cavallo continues rocky, with peaked hills covered with trees. To this succeeds a beach of sand and pebbles, extending 6 miles to the tower of Bari, and thence again, $6\frac{1}{2}$ miles, to Gemiliano tower, standing on a bluff headland nearly 300 feet in height, and at a mile to the northward of which is *Cape Bellavista*.

Capes Bellavista and *Monte Santo* lie nearly on the same meridian, at the distance of 10 miles. The intermediate coast forms a slender bay, called that of *Tortoli* or of *Ogliastro*, in the S.W. part of which is a lake of excellent water. Wood, wine, and provisions, are abundant here, but the anchorage is bad, and all but westerly winds cause a great surf. At 3 miles from Cape Bellavista, and three-quarters of a mile from the beach, are the two high islets of Ogliastro, with several rocks about them, nearly on a wash, but having 9 fathoms within a cable's length.

The whole space between Capes Sferra Cavallo and Monte Santo presents a charming cultivated plain, separated from the rest of Sardinia by chains of mountains, and studded by some of the best villages in the island, among which *Tortoli* may be distinguished by

by the cupola of its large cathedral: this village stands nearly on the parallel of Cape Bellavista.

Between *Monte Santo* and *Cape Comino*, a distance of 20 miles, is the *Bight of Orosei*. Dangerous cliffs and a ferocious race of people forbid an approach to the southern half of this extent. Beyond this, however, the shore becomes low and sandy as far as the town of *Orosei*, which is finely situated near the mouth of a rivulet, and surrounded by fertile plains, which afford an abundance of cattle, grain, cheese, honey, fruits, &c. remarkable for their superior qualities; but the atmosphere here is fatal to a stranger during several months of the year.

From *Punta Nera*, the extremity of the beach of *Orosei*, the coast trends nearly N.E. by N. [*N. by E. $\frac{1}{2}$ E.*] to *Cape Comino*, a distance of 8 miles. This part is elevated, bordered with rocks, broken only by three small coves. *Cape Comino* may be readily found from the offing; as *Monte Albo*, a tabled eminence, about 2317 feet high, stands a little inland from it, to the N.W., and shows its white limestone cliffs. In a fine plain, at the foot of this mountain, is the village and church of *Siniscola*.

Between *Cape Comino* and a point 4 miles to the N.W. the coast forms a small bay, that of *Siniscola*, which, though open to N.E. winds, is frequented by Genoese and Neapolitan feluccas, coming hither for cargoes of grain, fruits, honey, and cheese. A streamlet from *Mount Albo* runs into it.

The point last mentioned, 4 miles to the N.W. of *Cape Comino* is that of *Sta. Lucia*, which has a tower upon it. At 3 miles more to the northward is the old stone village of *Posada*, standing on the summit of a steep rocky hill. The inhabitants here mostly appear "as hard and as gloomy as their dwellings."

From *Posada northward*, to the distance of 20 miles, the country is described as a dreary blank, without other inhabitants than the shepherds who drive their flocks thither, for the scanty pasturage which it affords. *Point Sta. Anna* is 7 miles to the northward of *Posada*; and at a third of that distance from the latter a dangerous reef, the *Pedrami Rocks*, extend eastward to more than a mile from shore. The promontory named *Cape Coda Cavallo* is $6\frac{1}{2}$ miles N.N.E. $\frac{1}{2}$ E. [*N. by E.*] from *Point Sta. Anna*, and lies in latitude $40^{\circ} 49' 50''$, long. $9^{\circ} 43' 30''$ E. To the northward of this cape lie the islands *Molara* and *Tavolara*, having a passage between them, in which vessels may anchor; but they must approach with caution, as the islets *Tauladetto* and *Ceroi* lie to the eastward of *Molara*. *Tauladetto*, the outer islet, is a conical red rock, quite bare of vegetation, and 60 or 70 feet high, and two miles from *Molara*; *Ceroi* is a smaller rock, at a mile and a quarter from the same. *Molara* [ant. *Buccina*] is an island of granite, covered with brush-wood, a mile and a half long, and contains a few inhabitants.

The ISLAND TAVOLARA [ant. *Hermæa*] is a narrow island, composed of limestone, and nearly 1500 feet high. It is three miles long from E.N.E. to W.S.W. true, and presents, at first, a series of inaccessible cliffs. The N.E. point is high and conical, and has just within it a cove like a dock, open to the N.E., but in which two or three vessels may lie in westerly winds, in 5 fathoms, muddy bottom. The position of the beach at the head is, lat. $40^{\circ} 53' 54''$, long. $9^{\circ} 43' 36''$ E. The S.W. part of the isle forms a semi-circular bay, called *Spalmador di Terra*, with a sandy beach, where vessels also anchor.*

GULF of TERRA-NOVA.—This gulf lies to the north-eastward of *Tavolara*, and is bounded on the north by *Cape Figari*, in latitude $40^{\circ} 59'$. To the southward, nearly on the meridian of *Cape Figari*, is *Cape Ceraso*, at the distance of $4\frac{1}{2}$ miles. Around *Cape Ceraso* there is a dangerous shelf of rocks, which must be cautiously avoided. Westward of this is the port of *Terra-nova*, having a bar, without which there is good anchorage.

The Harbour of *Terra-nova*, designedly choked up during the hostilities of times past, is a fine expanse of water, 3 miles in length. The town at the head of it has a mean aspect; the whole country looks dreary and deserted, and the inhabitants correspond to the scene, being ferocious and wretched.

The country, for 5 leagues to the northward and north-eastward of *Terra-nova*, is an

* The scientific should read Captain Smyth's description of this island, in his "*Sketch of Sardinia*," page 235.

assemblage of high mountains; the coasts, exceedingly variegated and broken, form several good harbours.

CAPE FIGARI is a bold headland, terminating to seaward in steep cliffs, but gradually declining inland. On its south side is a little cove, *Cala Moresca*, whither boats resort to burn lime. The west side of this cove is formed by a high conical islet, *Figarello*, which abounds in wild olives, cabbages, peas, myrtle, juniper, and other spontaneous productions. A rocky shelf connects it to Figari.

Large ships may anchor to the west of the promontory of Figari, where they lie nearly land-locked. From this place, the island Tavolara, lying to the S.E. appears like a wall.

GULF of CONGIANUS.—The GULF of CONGIANUS is the large bay formed between *Cape Figari* on the south, and *Cape Libano* on the north. The distance between is nearly 3 leagues. The entrance is divided into two parts by a cluster of bare isles called *Li Mortarij*, of which *Mortorio* and *Soffa* are the chief. At the bottom of the bay, to the S.W., is the shallow port of *Congianus*, and eastward of this is another bight, the *Marinella*, with excellent anchoring ground in from 10 to 6 fathoms, but open to the N.E.

At a league to the North of the *Mortarij*, and half a mile from *Cape Libano*, is a smaller cluster, the *Rocks of Libani*. Beyond these, rather more than a mile to the N.W., is a little harbour, *Porto Cervo*, in which a ship may anchor, in 7 or 8 fathoms: but observe that, at half a mile to the north-eastward of the entrance, there is a rocky shoal of only 13 feet.

Inland, at $2\frac{1}{2}$ miles S.W. from the entrance of *Port Cervo*, is a remarkable square inclined rock, called *The Pedestal*, upon the summit of *Mount Mola*, which is very useful as a sea-mark in navigating about this coast.

In the country which has lastly been described there are very few dwellings, huts excepted; and hence to *Cape Longo Sardo*, the north end of Sardinia, there is a succession of rugged granitic mountains, among which are forests of holm-oak, yew, juniper, and wild olives, intermixed with a thickset underwood, wherein great numbers of mufflons, deer, and wild hogs, may be found.

The INTERMEDIATE ISLANDS [ant. *Insulæ Fossæ*] are those which have been commonly called the *Maddalena* and *Barelino Islands*. These groupes are composed entirely of red granite, and they form, with the main, several secure harbours, capable of containing fleets, and affording ingress and egress with any winds. The chief of the groupe is *Maddalena*, on the south side of which is a town with 1600 or 1700 poor inhabitants. The other islands have each a few temporary herdsmen only. *Maddalena* is about 11 miles in circuit, and has five forts for its defence, of which the principal, called *La Guardia Vecchia*, in the S.W., stands on an elevation of more than 600 feet. The telegraph tower here stands in lat. $41^{\circ} 13' 27''$, long. $9^{\circ} 23' 42''$ E. Variation, $17^{\circ} 56\frac{1}{2}'$ W.

CAPRERA, to the S.E. of *Madalena*, is 4 miles in length from North to South. It is high and irregular, and quite barren on the North and East. Near its centre is a peak, *Tugiolona*, upwards of 750 feet in height, near which is a spring of pure water. In the coves on the coasts the Neapolitan fishermen take great numbers of fine cray-fish for the supply of the Italian markets.

SPARGI, to the west of *Maddalena*, is high and covered with brushwood: it has two sandy bays, and a spring of excellent water near the *Cala Corsale*, on its western shore. Off *Spargi*, to the N.W., lies *Spargiotto*, a rugged barren islet, with a cluster of rocks off its N.W. extremity called *Spargiottelli*.

ST. STEFANO, to the south of *Maddalena*, is high, and has a small harbour on the south side, with a garrison of three or four soldiers. The promontory to the south of it is *Capo dell' Urso*, so called from its figure of a bear, looking to the S.W., formed by a natural mass of granite on the summit, and which is useful as a sea-mark.

In sailing about and among these islands attention must be paid to the '*raficas*,' or violent squalls from the hills; and it is considered as a sign of bad weather when Corsica cannot be seen; or, as the natives say, "when it has got its cap on."

The GULF of ARSAQUENA to the S.S.W. of *Caprera*.—The entrance to this gulf lies between the Island *Caprera* on the north, and *Cape Ferro* on the south. On the south

south side, near Cape Ferro, is a small low isle, named *Biscia* or *Biscie*, remarkable for the *acontias*, or little black snake, from which it received its name: from this island a reef extends to some distance E.N.E. On the opposite side, at $2\frac{1}{2}$ miles from Biscia, is a cluster of rocks, above water, called the *Monaci* (Monks), which lie at a mile and a quarter from the middle of Caprera. The passage between them and Caprera is clear, and has, in mid-channel, more than 40 fathoms of water, diminishing to 20 on either side. The rocks are always above water, and may be approached, in any direction, within a cable's length.

At the distance of rather more than a mile *true East* from the Monks, is a reef on which H. M. ship *Excellent* struck, on the 20th of May, 1804, and it should not be approached nearer than to 18 fathoms. The least water on this reef is 9 feet. The following bearings were taken when on the reef: the *Pedestal Rock*, a singular object already noticed, and Biscia Island in one, bearing S.W. $\frac{1}{2}$ S.; the southernmost point of Caprera on with a remarkable peak or summit within the opposite shore, W.S.W. $\frac{1}{4}$ W.; and a remarkable gap on the west end of the island Tavolara, a little open to the westward of the high peak on Cape Figari, bearing South, [S. 18° E.]

The *Middle Reef* is between the *Excellent's Reef* and the Isle Biscia, and has, on its western end, only 20 feet of water. It extends from West to East nearly a mile, and the depths increase gradually, in this direction, to 13 fathoms. The western part, which is most dangerous, bears from Biscia N.E. by N. at the distance of three-quarters of a mile, and from the *Excellent's Reef* S.W. nearly two miles. The mark for the fairway between the latter and Middle Reef is, a small hill on the coast, in the bottom of Arsaquena Bay, on with the middle peak of three, upon an inland mountain, bearing S.W. by W. $\frac{1}{2}$ W.

BISCEA Island lies nearly half a mile to the northward of *Cape Ferro*, and there is a good passage between, with deep water, 15 and 16 fathoms in mid-channel, but the rocks on the N.E. of the island extend thence nearly half a mile, and should not be approached nearer than in 15 fathoms.

The leading-mark between the Biscia Rocks and the Middle Reef is, the southernmost point of Caprera in a line with a deep notch, on the top of a remarkable mountain, inland, bearing W. $\frac{1}{4}$ N.

In Arsaquena Bay there is a reef, having 3 fathoms over it, which bears from the southernmost point of Caprera S.W., about one mile, and from the Isle of Biscia West, $2\frac{1}{2}$ miles. It should not be approached nearer than to 12 fathoms.

The *general marks* for knowing when you are clear to the eastward of the reefs, above described, are, the gap on the west end of the Island Tavolara open to the eastward of the high peak on Cape Figari, which is generally visible; and the Pedestal Rock, already mentioned, bearing S.W. $\frac{1}{2}$ W. [S. S.W. $\frac{3}{4}$ W.] The variation here, in 1804, was $18^{\circ} 45'$ W.

VIII. The COAST AND ISLANDS OF ITALY, *from the GULF of SPEZIA to CAPE SPARTIVENTO.*

FROM PALMARIA ISLAND, which has been described on page 83, to the town of VIAREGGIO, in the Duchy of Lucca, the bearing and distance are S.E. $\frac{3}{4}$ S. [S.E. $\frac{1}{4}$ E.] 20 miles. From the mouth of the River Magra, to the same place, the bearing and distance are S.S.E. $\frac{1}{2}$ E. [S.E.] 15 miles. The intermediate coast, which forms a considerable hollow, is altogether low, but the interior land is high, and a number of detached villages, with the towns of CARRARA and MASSA, may be seen from the sea.

In the *Road of Viareggio* the anchorage is very near the land, and the ground is very bad: besides, there is no shelter from the sea-winds; and, therefore, it is but little frequented. The port has, however, been improved by the formation of a mole for the reception of shipping. The town is inconsiderable. Inland, at 11 miles *true East* from it, is the City of Lucca.

The mouth of the RIVER ARNO, which river passes through the city of PISA, is $9\frac{1}{2}$ miles to the southward of Viareggio. It is protected by a fort on the left bank or south side
of

of the entrance. At Viareggio commences the low land, called the *Great Plain of Pisa*, over which, from the mouth of the Arno, you may see the celebrated leaning tower and the steeples of Pisa; hence also may be seen the village of *S. Pietro*, which stands at half a mile from the south bank of the Arno, $3\frac{1}{2}$ miles from its mouth, with several canals and riuulets. All the coast from Viareggio, where the plain begins, is a flat sandy shore, and some points stretch a great way under water, so that it is necessary to be very cautious on approaching.

PISA.—The City of Pisa, which stands at nearly 2 leagues from the sea, was once the city of an independent republic, and it still exhibits some beautiful remains of its antient greatness, sufficient to reward the visit of a traveller. The air around is wholesome in winter, but unhealthy in summer, though the territory affords all the comforts of life, including plenty of corn and wine. The city is spacious, and is said to have contained, at one time, 100,000 inhabitants, now reduced to about 16,000. The increasing trade of the port of Leghorn, to the southward, has contributed greatly to the decay of Pisa.*

Mr. Forsythe, a modern traveller, says, "Pisa, while the capital of a republic, was celebrated for its profusion of marble, its patrician towers, and its grave magnificence. It still can boast some marble churches, a marble palace, and a marble bridge. Its towers, though no longer a mark of nobility, may be traced in the walls of modernized houses. Its gravity pervades every street; but its magnificence is now confined to one sacred corner. There stand the Cathedral, the Baptistery, the leaning Tower, and the Campo Santo; all built of the same marble, all varieties of the same architecture, all venerable with years, and fortunate both in their society and in their solitude."

Another traveller, whose masterly pen has already enriched our pages, says, "Pisa, one of the oldest cities in Europe, and supposed to have originated in a colony from its Grecian namesake, was, at one time, the most flourishing city in Tuscany. But the sea deserted it; and with the sea gradually departed all its modern importance. What it retained longest, and up to a late period, was its renown as a place of learning and education. But even that has departed now. It has, indeed, an University, whose name is loth to abandon it; and the education, to those who are very much in earnest about it, is worth procuring, because private tuition, of a very attentive kind, is to be had for a trifle, and the university lectures may be attended gratuitously.

"What renders Pisa still interesting, and will continue to render it so as long as it exists, is its being left to a comparative solitude, and its containing one of the most singular, and many of the most antient, specimens of the arts in Italy. It now stands five miles from the sea, and so completely out of the ordinary roads of communication, that the writers of elaborate works upon Italy do not think it incumbent upon them to notice it. Such, however, as have a true taste for their subject, cannot be well satisfied with themselves for the omission. Let the reader imagine a small white city, with a tower also white, leaning very distinctly in the distance at one end of it, trees on either side, and blue mountains for the back-ground. Such is the first sight of Pisa, as the traveller sees it in coming from Leghorn. Add to this, in summer-time, fields of corn on all sides, bordered with hedge-row trees, and the festoons of vines, of which he has so often read, hanging from tree to tree; and he may judge of the impression made upon an enthusiastic admirer of Italy, who is in Tuscany for the first time. It looks like a thing you have dreamt of, and answers most completely to the imagination.

"In entering the city the impression is beautiful. What looked white in the distance remains as pure and fair on a closer acquaintance. You cross a bridge, and cast your eye up the whole extent of the city one way, the river Arno (the river of Danté, Petrarch, and Boccaccio) winding through the middle of it, under two more bridges; and fair elegant houses, of good size, bordering the white pavement on either side. This is the *Lung'arno*, or street along the Arno. The mountains, in which you now

* The climate of PISA is said to be the best winter-climate in Europe, and Pisa therefore to be decidedly preferred to every other city of Italy, by persons afflicted with pulmonary complaints, from the commencement of October till the end of April. Invalids are, however, recommended never to sit, stand, nor walk, in the sun, without being defended by a parasol, and always to prefer walking on the shady side of a street. That side of the Pisa bay called *La parte di Mezzo Giorno* [South] is the best situation, because warmer and less damp than any other.—Compare with this note the description of the climate of Sardinia, pages 93 and 94.

discover the look of their marble veins, (for it is from these that the marble of Carrara comes,) tower away beautifully at the farther end, and seem much nearer than they are: The Arno, which is, perhaps, about as wide as the Isis, at Oxford, is sandy-coloured, and, in the summer-time, shrunk; but still it is the river of the great Tuscan writers." — *Letters from Abroad*, 1822.

LIVORNO, or **LEGHORN**.—In latitude $43^{\circ} 33'$, and 3 leagues S. by E. true, from the mouth of the Arno, is **LIVORNO**, the chief port of Tuscany, commonly, by the French, called *Livourne*; by the English, *Leghorn*: a barbarism sanctioned by custom. This was the antient *Portus Herculis Labronis* or *Liburni*. It is a handsome, regular, and well-built, town, containing about 50,000 inhabitants, among whom Jews are very numerous. The land about it is low and marshy, but several canals about the town, by draining it, have rendered it fit for culture, and contributed to diminish the *malaria*, or noxious effluvia, which formerly prevailed. Fresh water is commonly so scarce that it is brought from Pisa.*

LEGHORN is well fortified, and has before it, on the west, two basins of considerable magnitude, which are shut by night with chains and a boom. The entrance is between two forts. Without the basins is a large mole, by the side of which vessels enter, and, when in, lie with their sterns toward it, with a cable fast thereon; and an anchor out a-head on a bank, on which the depth of water is not more than 7 or 8 feet. Lying in this manner, there is room for two tiers of ships, well sheltered from westerly winds. The largest ships lie nearest the mole-head, where there is 19 feet of water. To sail in, a vessel must pass between the shipping and the mole, astern of the tiers. The lighthouse stands on a clump of rock, without the mole, as represented in the figure annexed.



Harbour of Leghorn, with the Carrara Mountains in the distance, to the left.

At the distance of 5 miles S.S.E. true from the mole, is the outer point of *Monte Nero*, having two towers upon it; and, on the coast, at half a league to the northward of this point, is the *Fort of Antignano*, situate on a low shore, which extends thence to Leghorn. From the point of *Monte Nero*, and trending to the north-eastward, the ridge of *Monte Nero* rises to a considerable height, and it terminates behind, or to the eastward, of Leghorn. Thus the port may be readily distinguished by those coming in from sea. On the lower part of the western side of *Monte Nero*, at nearly two miles to the north-eastward from the point, is the church and convent of *Madonna de Monte Nero*, with some houses near them: these form a useful mark.

The ROAD of **LEGHORN** lies with the mole bearing S.E. by E., and is sheltered from

* On the outskirts of Leghorn there is now an interesting and beautiful cemetery for Protestants. It is surrounded by rows of cypresses, willows, and other evergreens; and numerous monuments of Carrara marble adorn the interior. This cemetery has been used principally for the interment of the English who have died at Leghorn and Pisa, among whom are *Dr. Tobias Smollett*, ob. 10th September, 1773.

westerly winds by the *Malora Bank*, an extensive shoal of quicksand, which is 4 miles in length from north to south, and from a mile to a mile and a half in breadth; and the depths on it are from 2 feet to 3 fathoms. The ground on this bank, and that within it, in the road, is of mud and sand: but the outer edge and south end are rocky. Near the south end, the shoalest part, stands a square tower, with an archway, called the *Malora Tower*, a useful mark, from which the lighthouse bears E.S.E. 4 miles. Toward the bank is a gradual shoaling in every direction.

The *North Channel*, which is between the north end of the *Malora Bank* and the main land, is considered to be the best for large ships, particularly when coming in from the northward; there is, in its mid-channel, from 9 to 6 fathoms of water. A good leading mark is, the lighthouse in one with the third white house on *Monte Nero*: these houses are near each other, and near the convent of our Lady of *Monte Nero*, in a direct line between the lighthouse and the latter. In working in or out of this channel, stand toward the *Malora* into 5 fathoms, and towards the main-land into the same depth; in the latter case you will have the point of *Monte Nero* shut in with the lighthouse.

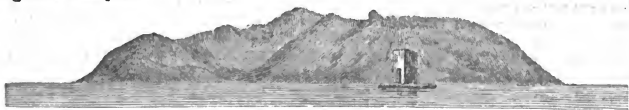
There are six shoal spots, or overfalls, in the Road of *Leghorn*, two of which have less than, and the others about, 4 fathoms over them: a berth should therefore be selected. The best anchorages are to the north-westward of the town, with the south-end of the island *Gorgona* just open to the northward of the *Malora Tower*, and the lighthouse S.S.E. $\frac{1}{4}$ E. or S.E. by S. in from $5\frac{1}{2}$ to 7 fathoms of water, good holding-ground: another situation is with the *Malora Tower* W. $\frac{1}{4}$ S. on with *Gorgona Island*; the lighthouse S. by E. and the mole-head S.S.E., in from 5 to 6 fathoms of water. You moor with the best bower to the westward, so as to have an open hawse with southerly winds, which send a heavy grown swell into the road, and cause the cables to thresh very much.

In heavy gales, from the southward and westward, the sea breaks on every part of the *Malora Bank*, and it is probable that the ground in the road banks in those gales; it is, therefore, always necessary to under-run the cables so soon as a gale is over.

To sail in by the *South Channel*, bring the lighthouse to bear E. $\frac{1}{4}$ S. [*E. by N.*] or nearly so, and keep it so until the *Malora Tower* is full a mile to the westward of you. You may then anchor with the *Malora Tower* W. by N. or W. $\frac{1}{4}$ N., and the lighthouse S.E. by S., in from 6 to 7 fathoms, bottom of sand and mud; or you may haul up more to the northward, and take the station above directed.

If going in this way by night, bring the lighthouse to bear E. by S., and take your soundings from the main, that you may certainly be clear of the *Malora*.

GORGONA.—Ships from the westward make the little island *GORGONA*, which is an excellent mark for those bound to *Leghorn*. This island, the antient *Urgos*, lies in lat. $43^{\circ} 26'$; and the lighthouse at *Leghorn* bears from it E. $\frac{1}{4}$ N. [*E.N.E.*] $18\frac{1}{2}$ miles. It is high, appears almost round, and has two towers, with some fishermen's huts, and an old monastery or magazine upon it. Near its N.W. point is a sunken rock, but it is, in general, steep-to.



Appearance of Gorgona and the Malora Tower, bearing W. 10° S. from the anchorage of Leghorn.

DIRECTIONS FOR LEGHORN, &c. from the Journal of Mr. Wm. Smith.

To sail into *Leghorn Roads* from the northward, the marks to clear the north end of the *Malora Bank* are the southernmost hillock of the high mountains over the plains of *Pisa*, on with a small guard-house or tower [*Mezza Spigaglia*] near the sea-side, bearing E. by S.; keep these marks on until you bring the lighthouse on with the first hill to the southward of *Mount Nero Church*, bearing S. by E. $\frac{1}{4}$ E., which will lead you to the anchorage. You will have from 8 to 5 fathoms of water. It would not be advisable to run through the knolls in the roads with a large ship and a heavy sea; but, in smooth water, there is no danger, observing to keep the aforesaid hill on *Mount Nero* a little open to the eastward of the lighthouse, until within three-quarters of a mile of the latter:

latter : you will then be to the southward of the knolls, and may steer out S.S.W. or S.W. by S. In coming in, through the North Channel, with a beating wind, stand to the main into 5 fathoms, and to the Malora into the same depth.

To sail in from the southward, give the Malora Tower a berth of one or one and a half mile; bring the lighthouse to bear about East by compass, or on with the south end of the town; then steer for it until the Malora Tower bears N.W.; you may then haul up to the north-eastward for the anchorage.

There is always a current setting either to the northward or to the southward, through the roads, which is much influenced by the winds; but no rise or fall of water that we could perceive.

Ships of war generally water at the lazaretto at the back of the town; you fill your casks in the boats with a short hose, which you fix on the end of a spout. Wood is plentiful, good, and cheap.

All kinds of meat and vegetables are very cheap: and fruit in its season: fish also are plentiful and cheap.

THE FOLLOWING REMARKS ON LEGHORN, &c. ARE FROM THE JOURNAL OF ANOTHER BRITISH OFFICER.

"On approaching the Roads from the southward, the soundings will be found from 20 to 10 fathoms. All the coast, from the point of Monte Nero (which is the southernmost point of the road) to the powder tower [*Torre Marzocco*], which stands on the beach to the northward of Leghorn, is bordered with rocks and shoals, which extend, in some places, half a mile out. The lighthouse stands on a ledge of rocks, extending to the westward half a mile from the S.W. part of the town-wall, and over which the sea breaks heavily in bad weather.

"Ships coming into the roads may have pilots by making the signal. No ships go into the mole without one; the channel being intricate and dangerous.

"Near this road, or in its neighbourhood, there is no shelter or place for anchoring; nor have ships much shelter here from northerly and southerly winds. A wind from N.E. to S.E. is directly off-shore; and with these winds the water is generally smooth, but very heavy gusts are not infrequent. With winds from W. by S. to N.N.W. the Malora Bank breaks off much sea.

"The city of Leghorn is surrounded by walls and ditches, on which an immense number of cannon are mounted. Boats may land within either the inner or outer mole, but the inner is generally preferred. The boom is always shut at sun-set. Leghorn is a place of great trade, particularly in the Newfoundland fishery. During peace, the Greeks export corn hither, in great quantities, from the Morea. The tide or current hereabout mostly runs to the N.W. and W.N.W. and it is sometimes very strong."

ISLAND CAPRAIA.—This island, antiently *Ægilon*, lies in latitude $43^{\circ} 2'$ between Corsica and the coast of Tuscany. It is nearly 4 miles in length from North to South, inhabited, and has a small fortress upon it. In case of necessity, small vessels may anchor off a cove upon its eastern side. Capraia belongs to Tuscany, and bears S. 26° W. [S. 8° W.] 7 leagues, from Gorgona; E.S.E. $\frac{1}{4}$ E. [E. $\frac{1}{4}$ N.], 17 miles, from Cape Corso; and S.W. $\frac{1}{2}$ W. [S.W. by S.] 35 miles, from Leghorn.



Appearance of Capraia, bearing W.S.W. (by compass) 9 miles distant; taken in *H. M. S. Aid*, 1818.

LEGHORN to PIOMBINO.—At the distance of 10 leagues to the S. $\frac{1}{4}$ W. [S. by E.], from the point of Monte Nero is *Cape Baratto*. The coast between forms a long but not a deep bay, and its shore is generally low; but within, at the distance of about two leagues, is a ridge or chain of high land, which thence declines towards the sea. On the declivity a number of villages may be seen, particularly those named Castiglionello, Vado, Cecina, Bibona, Castiglioncello, Osteria, Campanella, S. Vincenzo, Dono-

Donoratico, Campiglia, and Baratto. The last is on a small sandy harbour, at a mile and a half to the north-eastward of the cape.

CAPE BARATTO is a large high point, having a castle and tower on it, and there is a redoubt on a rising ground to the northward of the town. The cape, being connected to the main by a neck of low land, appears on both sides like an island.

In approaching towards the shore, at about 8 miles to the southward of Monte Nero, it is to be observed there is a rocky shoal, which bears S.E. by E. [*E.S.E. $\frac{1}{2}$ E.*] $6\frac{1}{2}$ leagues from the island Gorgona. It is said to have been once the town of Vado, now covered by the sea. The depth over it is from 9 to 15 feet, but near it are 6 and 7 fathoms. As it lies in the track of ships running along shore, it must be carefully avoided.

PIOMBINO.—At 4 miles to the south-eastward from the extremity of Cape Baratto is the town of *Piombino*, on the S.E. point of the promontory, which, with the island of Elba, forms the CHANNEL of PIOMBINO. Close to the end of the point between, is a great rock above water, with some others near it.

Piombino, the capital of a principality to which it gives name, was united to Tuscany by the general treaty of 1815. It is small, but well fortified, and has a citadel at nearly a mile to the eastward. The latter has a square tower, on a low point of rocks, within which is an anchorage, sheltered from N.W. winds.

BAY or FULLONICA.—The Bay of Fullonica is a semi-circle formed by the coast between Piombino Point to the N.W., and *Cape Troja*, (*pr. Troya*.) to the S.E. The bearing and distance between these points are S.E. by S. [*S.E. $\frac{1}{2}$ E.*] 12 miles. The north shore of the bay is low, sandy, partly covered with shrubs, and partly morass. At E.S.E. $\frac{1}{2}$ E. [*East*] from Piombino Point, and intersected by a small rivulet, is the town of Fullonica, with its jetty. The whole of the bay is bordered with a shelf, from the edge of which the water gradually deepens. The *Torre Mozza* defends the coast at $3\frac{1}{2}$ miles to the westward of Fullonica; and between these places are two reefs, at some distance from shore, which must be cautiously avoided.

The mouth of a lagoon, the *Lake Scarlino*, is two miles to the southward of Fullonica. Off this there is good anchorage, with muddy bottom, in from $5\frac{1}{2}$ to 8 fathoms, with Cape Troja bearing S.S.W. [*S. $\frac{1}{2}$ W.*] 6 miles distant, and in sight of the towers of S. Nicolo and Civetta, standing upon rocky points of land on the intermediate coast.

Cape Troja, in latitude $42^{\circ} 47' 30''$, longitude $10^{\circ} 45' 40''$, has a square tower standing on it, another a little way within it, and a village at the bottom, or landing-place. Off its extremity, at the distance of a mile, is an islet, the *Rock Troja*, which is high, and has a watch-tower upon it. From Cape Troja a reef extends half way over toward the islet, and some of its rocks are above water. There are also some rocks near the east end of the islet, so that the passage between must be dangerous to a stranger.

CHANNEL of ELBA.—This channel is formed by the coast of Piombino to the N.E., and that of the island Elba on the S.W. The distance between the two is 6 miles. Between the north end of Elba and Cape Troja, and nearly in a line, lie the islets *Palmajola* and *Cervoli*, the first at 3 miles S.E. by E. $\frac{1}{2}$ E., [*E. by S.*], from Cape Vita, the north end of Elba, and the second at 7 miles from the same cape. The islets are high; each has a watch-tower upon it; and from the north end of *Palmajola* there is a reef, but they are otherwise bold-to.

ISLAND of ELBA.—CAPE VITA, the northern extremity of this singular island, bears from the town of Piombino W.S.W. $\frac{1}{2}$ W., [*S.W. by W.*], distant 6 miles. From Cape Vita the extent of the island to the south is 10 miles; its greatest extent east and west is 15 miles. Elba was the *Æthalia* of the Greeks, and the *Ilva* of the Romans; it is high, and is of very irregular shape. Its population, in 1814, was stated to be 12,250, in its different towns and distributed over the country, and now it probably amounts to 14,000. The climate is mild and pleasant, the air being cooled by the sea-breezes. Hence it produces plants and fruits unknown to grow on the main of Tuscany, notwithstanding its contiguity. It has no river, but a number of springs, and several rivulets. Of the latter, the chief is the *Rio*, on the eastern side, which rises by a town of that name, and runs, through the iron-minè of the same appellation, to the sea, at less than a league from its source.

The island abounds in lofty mountains, covered by numerous plants and shrubs, mostly odoriferous, which fill the air with fragrance; still, from unaccountable neglect, bees are rare.

rare. The soil is susceptible of great improvement. The trees most common are the cork tree, the green oak, the citron, orange, and all the fruit-trees known in Europe, the apple alone excepted. Its melons, particularly those termed *pastechi*, are excellent, and all the fruits are of fine flavour. The superior lands of the valleys and gently-rising eminences produce abundance of grapes, of which wines are made resembling the Spanish of Valencia and Catalonia; also olives, figs, maize, beans, peas, and a small quantity of grain: but, with all these, from want of industry, much land remains uncultivated. Pastures are rare, and the number of sheep, cattle, mules, and horses, small. Wood is scarce; but, owing to the warmth of the climate, little is required for firing. Different kinds of metals have been found in the island, including gold, silver, copper, iron, the loadstone, and lead: and of minerals, marble, granite, sulphur, vitriol, amianthus, stone for building, and slate. The iron mines have imparted celebrity to Elba; more especially those of Rio, on the eastern side, already noticed, and which have been very productive.

The chief ports of Elba are, PORTO FERRAIO on the north-side, and PORTO LONGONE on the S.E. Near Porto Ferraio are salt-ponds. The fishery, the import of necessaries, or grain and clothing, and the export of fruits, wine, tunny, (caught about the island,) salt, metals, and minerals, particularly iron, make up, with agriculture, the sum of the commerce and industry of the population.

The city of Porto Ferraio stands at the distance of 5 miles W.S.W. [S.W. $\frac{1}{2}$ W.] from Cape Vita. It is seated on the western side of a small bay, upon a lofty mountain, commanding a fertile valley strewed with country-houses. Its streets are, most of them, terraces cut out of the rock, the houses handsome, and the population about 5000. Its port is capable of receiving ships of the line, but to them it is dangerous with northerly winds. The citadel and fortifications have great strength. Near the city, on the summit of a steep rock, within the port, is a small tower, called *Prosthina*, so situated as to be impregnable.

The town of PORTO LONGONE, on the S.E., takes its name from the shape of the harbour, which is long and narrow. This town is divided into Upper and Lower. The latter part of it, along the shore, is inhabited by fishermen, mariners, and merchants. The Upper town is comprised within the citadel. This, on the top of a mountain, is very strong by nature as well as by art. The entrance of the port, on the south side, is defended by a fortress, built on a tongue of land projecting into the sea.

The people of Elba have been described as, in general, good and hospitable, but addicted to flattery; of an ordinary height, well made, and of an excellent constitution, which is preserved by frugality and manly exercises. Their hair is generally black, their complexion brown, and their looks lively and penetrating. Unacquainted with the luxury of great cities, the ordinary dress of the women is a hat of black straw, a white bodice, a short petticoat of red or blue, with decorations of flowers, rings, &c. The ordinary food of the Elbese consists of dried pulse, poor cheese, made of ewe's milk, salted and smoked provisions, coarse bread, fresh fish, chiefly tunny, and a few vegetables. The salted cheese of Sardinia is an article of great consumption. They also consume a vast quantity of chesnuts, which they grind into flour, and can make into an agreeable pastry. It is only upon holidays that their economy allows them to indulge themselves in fresh meat, and in an excellent white wine. On ordinary days they breakfast upon chesnut-cake, towards noon dine upon bread and beans, lentiles, or some other species of pulse, boiled and seasoned with oil; and, in the evening, their repast is soup, and fresh or salt fish. Their houses are low, but neatly and solidly furnished. The inhabitants of the towns, as is commonly the case, bestow more regard upon their tables and houses, and enjoy excellent bread, meats, and fish, fruits and vegetables, the chief part of which they procure, at a heavy expense, from the continent.

ON ADVANCING TOWARDS PORTO FERRAIO, the town will be seen, standing on the western side, as already described. The entrance of the harbour is a mile and a half in breadth. The western point, on which the town is seated, is high and steep: it is separated from the island by a canal, over which is a bridge. At about 500 fathoms to the north-westward of the town is a round islet, between which and the land you may pass in mid-channel without danger. At about half a cable's length to the northward of the islet are some rocks under water. On the south side of the town, within the port, is a little harbour, having a depth of 3 or 4 fathoms, which shuts up with a chain, and is capable of containing five or six galleys.

A light.

A light-house stands on the N.E. point of the fortification, which may be seen at a great distance off, and on which a light is shown by night.

To sail into *Porto Ferraio*, give the western or town point a berth of two cables' length, in order to avoid some shoal spots which lie off it; and, when you open the mole, you may proceed to anchor.

The south and west sides of the bay are flat, but shoalen regularly; so that, by keeping the lead going, you may advance to what depth you please. The best anchorage is in from 9 to 7 fathoms, good oozy ground, at the distance of from 3 to 5 cables' south of the mole. Gallies generally carry fasts ashore to the foot of the tower, at the entrance of the mole, or to the other side of the mole. Ships generally anchor farther out, in order to be in readiness for getting under sail.

There are salterns, or salt-ponds, on the low ground to the westward of the town, and some others within a point at the bottom of the bay, but the water is too shallow to permit a near approach to them. The watering-place is on the eastern side of the bay, near a point of rocks.

Winds from the N.W. and S.W. only, are troublesome here; but they cause no sea, because they blow over the land. Ships going in by night, must take care and not get entangled in the tunny-nets, which lie about half a mile E.S.E. from the lighthouse, and extend nearly half-way across the bay. Wood in this port is plentiful and cheap: fresh-beef and vegetables may be had, but they are dear: fruits are plentiful in the proper season.

PORTO FERRAIO WESTWARD.—On proceeding westward, from *Porto Ferraio*, you pass *Cape Bianco*, a broad point, at a mile from the town, N.W. by W. $\frac{1}{2}$ W. [*W.N.W. $\frac{1}{4}$ W.*] Near to this cape are two shoals, on which the sea sometimes breaks. At nearly three miles more to the N.W. by W. is *Cape Infola*, the extremity of an arm of land, with some rocks about it, and which forms the eastern side of a bay lying beyond it. From *Cape Infola* the N.W. end of the island bears W. $\frac{1}{2}$ N. [*W. by S.*] at the distance of 7 miles.

The *Western Coast of Elba*, which is foul and rocky, rounds to the south-eastward, as far as *Cape Fetovaglia*, which may be considered as the S.W. point of the island. The S.E. point is *Cape Calamata*, which bears from the former S.E. by E. $\frac{1}{2}$ E. [*E. by S.*] 13 miles. The coast between forms five different bays, the second of which is that of *St. Pietro del Campo*, at a league and a half to the eastward of *Cape Fetovaglia*. At the bottom of this bay is the village of *Campo*, and near to it, on a rising ground, is the castle of *St. Hilary*: in this inlet galleys may anchor, and lie securely with land-winds; but S.E. winds blow full in, and then it is unsafe to remain there. When going in, approach the western point, on which is a tower, no nearer than a cable's length, as some rocks lie off it; but keep nearly in the middle of the entrance, and, when in, you may anchor against the tower, or farther in, at pleasure, and carry a fast on shore upon the point where the tower is: here you will find from 4 to 5 fathoms of water, on fine sand and mud. In the bottom of the bay, near to some houses, is a rivulet, where good water may be had. This place may be known, on approaching from the westward, by a large high point, with several white spots on it; afterward, at a little farther to the eastward, you will see the tower on the western point of the entrance, and then a sandy shore, with some cottages to the N.W. Off the eastern point are two rocks above water, one of which is two cables' length off.

From *Cape Calamata*, rounding to the N.E. and North, you will make the entrance of *PORTO LONGONE*, already noticed. This harbour is very deep, and has several places where ships and galleys may anchor. Upon the starboard side, on going in, is seen the citadel, standing on a point of rocks, which are steep-to; within this point is the anchorage. Opposite to the citadel is a small fort, *Castel Focardo*, which also serves to protect the entrance. E.S.E. winds blow directly up the harbour.

The outer point of the entrance of *Porto Longone* is half a league to the eastward of the town: at $2\frac{1}{2}$ miles thence, to the N.N.E. [*North*] is the little creek *Ferriera*, noted for iron-mines, and which may be known by its store-houses, &c. You may anchor before these in 18 or 20 fathoms of water, but the ground is of coarse gravel, and not good for holding, and there is no shelter from the sea-winds. A watch-tower stands on the S.E. point, and near it is a large rock above water.

From *Ferriera* to the north end of *Elba* the distance is 4 miles. At half a mile from this end of the island is an islet, named *Topi*, of a triangular form, but appearing almost round,

round, with a sandy shore behind it: the passage between will admit boats only, but you may sail as near without it as you please.

GENERAL REMARK.—We shall add only, with respect to Elba, as a well-attested fact, that *the compasses of vessels approaching the coast are frequently deranged*, owing to the quantity of iron and ferruginous matter in different parts of the island, within the limits of the attraction of which they may happen to fall. This attraction, it is said, has been more especially noticed on the south and east.

PIANOSA, or **PLANOSA**.—The north end of the isle bearing this name lies at the distance of $9\frac{1}{2}$ miles *true* South from the S.W. point of Elba. Pianosa is a very low irregular island, covered with shrubs, and is about 3 miles in breadth. The North and N.W. sides are represented as generally bold; but, from the S.W. point, a reef of rocks stretches off to a considerable distance. Gallies may anchor on the eastern or western sides of the island with an off-shore wind: at the distance of three-quarters of a mile are from 10 to 12 fathoms of water. This isle has very few inhabitants. Its N.W. side forms a sandy bay, having good ground in from 16 to 7 fathoms. Off the north end is an islet, *Marchese*, and off the S.W. end another, called the *Turk's Rock*. The S.E. coast is generally rocky and foul; but the South coast clear, with sand and weeds. Here, from a fountain on the beach, water may be obtained.

MONTE CRISTO.—The isle bearing this name is very high, though only two miles in extent from North to South. At a distance it appears round. Its situation is in lat. $42^{\circ} 19\frac{1}{2}'$, long. $10^{\circ} 20' E.$, at 14 miles S. by E. $\frac{1}{2} E.$ [*S.E. by S.*] from the S.E. end of Pianosa, and $8\frac{1}{2}$ leagues S. $\frac{1}{2} E.$ [*S.S.E.*] from the S.W. point of Elba. On its western side is a large rock above water, and another on the eastern side. Off the S.E. shore a vessel may anchor, in case of necessity; as likewise in a cove, the *Cala Maestro*, on the N.W.

The **AFRICA ROCK**, formerly *Formiche*.—At 11 miles S. $\frac{1}{2} W.$ [*S. by E.*] from the S.W. end of Pianosa, and 8 miles W.N.W. [*W. $\frac{1}{2} N.$*] from the N.W. end of Monte Cristo, is an islet, now called the *Africa Rock*, having about it several smaller rocks, above and under water; and, at $2\frac{1}{2}$ miles N.E. by N. [*N. by E. $\frac{1}{2} E.$*] from the Africa Rock is the *Africa Reef*, a small shoal of $2\frac{1}{2}$ fathoms, lying with the N.E. point of Monte Cristo S.E. $\frac{1}{2} E.$ [*E.S.E.*] 3 leagues distant. These are very dangerous, especially by night, and great caution is required, during a calm, lest the current should carry you on them. The distance between the reef and the coast of Corsica is $8\frac{1}{2}$ leagues; and, if sailing here by night, you should also be careful how you approach the latter; for, although the interior land is high, the coast is low, so that you may be deceived, and think yourself farther off than you really are. Equal caution is required for avoiding the Africans and the Isle Pianosa: the latter, as already noticed, being very low.

The *Africa Reef* will be avoided on the south by keeping the summit of Monte Cristo E.S.E. [*E. $\frac{1}{2} S.$*] or more to the eastward. You may safely pass, with a leading wind, between the islet and Africa Reef, with the summit of Monte Cristo S.E. $\frac{1}{2} E.$ [*E.S.E.*]

From the Summit of Monte Cristo, Cape Calamata, the S.E. end of Elba, bears N.N.E. $\frac{1}{2} E.$ [*N. by E.*] $23\frac{1}{2}$ miles; Cape Troja or Troja N.E. $\frac{1}{2} E.$ [*N.E. by N.*] 34 miles; the summit of the Isle Giglio E.S.E. $\frac{1}{2} E.$ [*East*] 28 miles; that of *Gianuti* S.E. by E. $\frac{1}{2} E.$ [*E. by S.*] 36 miles; and the port of *Civita Vecchia*, in the Roman territory, S.E. by E. $\frac{1}{2} E.$ [*E.S.E. $\frac{1}{2} E.$*] 65 miles.

COAST OF TUSCANY, &c. continued.—Cape Troja, which bears from Piombino as shown in page 111, has a square tower standing on it, another a little way within it, and a village at the bottom, or landing place.

On a steep rock, at $4\frac{1}{2}$ miles S.E. $\frac{1}{2} E.$ [*E.S.E.*] from the Rock Troja, is the square white tower of *Rochetta*; at a mile beyond this is a rivulet, and at 4 miles the town of *Castiglione della Pescaja* or *Castiglione*, with some fortifications. The coast between curves a little, and has a sandy shore. The *Marina*, or Port of Castiglione, distinguishes the entrance of the lake of that name, which is famous for its production of salt.

From the *Marina* of Castiglione the points of the River *Ombro* bear S.S.E. [*S.E. $\frac{1}{2} S.$*] 9 miles: the shore between, which is very low and sandy, forms a semi-circular bay, upon which stand the towers of *Marsa*, *S. Rocco*, and *Fort Trappola*. Inland are Mount Moscone and the town of Grosseto.

From

From the mouth of the Ombrone the coast trends easterly to the distance of 3 miles; it thence becomes elevated and takes a sudden turn to the south. The village of *Talamone*, which stands on a steep point of rocks of the same name, is $2\frac{1}{2}$ leagues S.S.E. $\frac{1}{2}$ E. [S.E.] from the mouth of the Ombrone, and is fortified. At the distance of a league and a half to the northward of Talamone is a small cove, the *Cala Forno*; at $2\frac{1}{2}$ miles is the *Torre Canelle*, and in the vicinity are three rivulets.

In a cove to the eastward of Talamone, and, in case of necessity, vessels may anchor. On an eminence to the eastward of Talamone stands the inland town of *Magliano* or *Maliano*, which may be seen from the sea. The cove is open to S.W. winds, but the ground is good. In entering, you may round the citadel within half a mile, there being a depth of 7 fathoms near the point, and the same depth in the middle of the bay, shoaling thence to 4 and 3 fathoms, mud. Here you may obtain oxen, sheep, and goats, but fresh water is brought from wells in the country.

The FORMICHE.—The islets called the FORMICHE are three flat rocks, lying at the distance of 7 miles W. by N. [W. $\frac{1}{2}$ S.] nearly, from the mouth of the Ombrone, and 12 miles S. by E. [S.S.E. $\frac{1}{2}$ E.] from Cape Troja. They range in a line S. by E. $\frac{1}{2}$ E. and N. by W. $\frac{1}{2}$ W. in an extent of a league and a half, but are separated by large intervals of deep water. The tower of Cape Troja bearing N.N.W. [N.W. $\frac{1}{2}$ N.] leads clear within them towards the promontory of Argentaro.

From the Formiche to the north side of MOUNT ARGENTARO, the bearing and distance are S.S.E. $\frac{1}{2}$ E. [S.E.] 5 leagues. The land between Talamone and the Mount forms a bay, with a very low sandy shore, near the middle of which is the *Albegna*, a small river, and some salt-ponds. Fort *St. Stefano* stands on a point of rocks, at the north end of Mount Argentaro; and, at about two miles to the eastward of this, on the low sandy shore, are two watch-towers, situated on different points: of these towers the westernmost is square, and the other round: near the latter is the entrance of the *Lake of Orbitello*, which may be known by its point being low, covered with trees, and sandy at the extremity. The lake is 5 miles long, and is distinguished by the town of ORBITELLO, which stands on the end of a low point upon the eastern side, and stretches toward the middle of the lake. Boats only can enter and go to it.

MOUNT ARGENTARO [ant. *Argentarius*] is a high and extensive promontory, in front of the Lake of Orbitello, which trends in a N.W. and S.E. direction two leagues. It may be seen more than 10 leagues off, and, when it appears in the above directions, it shows like an island.

At about a league to the south-westward of Point *St. Stefano* is an islet, between which and the main is a narrow passage for small vessels. To the S.S.E. from this islet the coast is very high and steep: it has several watch-towers on the points, and one on the top of the mountain, with a small house near it. Another islet, *Rosso*, lies at $3\frac{1}{2}$ miles to the southward of the former, and at half a league to the N.N.W. of the southern extremity of the mount.

PORT HERCOLO or ERCOLE'.—At nearly 3 miles to the E.N.E. from the south point of Argentaro, and near the coast, lies the islet *Archetto*, within which, to the N.E., is the small bay, now known as *Port Ercolè*, defended by a fort, *Stella*, on its western point. This place is open to all winds from the southward. Its little port is on the western side, and shut in between two high points. The port is about a mile to the northward of the islet, and shut in between two high points, upon the westernmost of which stands the fort, and at its foot a small fortified town. On the eastern point, which is lower than the other, is *Fort Philip*, considerable both from its situation and the strength of its buildings. The entrance of Port Hercolo is not more than a cable's length across, and about a cable and a quarter deep; it was formerly a good harbour, but is now so much choked up with mud and sand as to be capable of containing five or six galleys only, and they must lie alongside the town, with their heads to the sea, moored with four cables, in about 4 fathoms, on mud and weeds. In the entrance are 8 fathoms. In the bottom of the port are some houses, and a fountain, where you may obtain water. The S.E. wind blows full in, and throws in a great sea, from which there is no shelter.

At about 3 miles to the eastward of Port Hercolo is *Cape Ansedonia*, which has two watch-towers on it, half a mile from each other. Opposite to this point, at half a league distant, is a flat islet, called the *Formica of Ansedonia*, between which and the land is a good and deep channel of 10 to 15 fathoms.

GIGLIO and GIANUTI. [*Ant. Igilium and Dianium.*].—To the westward and southward of Monte Argentaro are the islands *Giglio* and *Gianuti*. The first is four miles in length from north to south, and nearly two in breadth. It is elevated and well inhabited by people engaged in fishing and agriculture. The north side forms an open cove, *Porto Campese*; but its port and town are on the eastern side. The island is noted for its quarries of beautiful marble.

Captain Smyth places the south point in latitude $42^{\circ} 17' 15''$, and longitude $10^{\circ} 59' E.$, and hence the south point of Monte Argentaro bears East, [*E.N.E. $\frac{1}{2}$ E.*] $9\frac{1}{2}$ miles; the port of *Civita Vecchia* S.E. $\frac{3}{4}$ E. [*E.S.E. $\frac{1}{2}$ E.*] $36\frac{1}{2}$ miles; and the S.W. point of the isle *Gianuti* S.E. $\frac{1}{2}$ S. [*S.E. by E.*] $8\frac{1}{2}$ miles.

GIANUTI.—This isle, of moderate height, is little more than a mile in breadth, but its south-eastern shore forms a small harbour, useful during northerly and westerly winds. From the S.E. point of the isle, *Civita Vecchia* bears S.E. by E. [*E.S.E. $\frac{1}{2}$ E.*] $27\frac{1}{2}$ miles.

THE ROMAN OR PAPAL TERRITORY.

From the S.E. point of *Cape Argentaro* to the mole of the town of *Civita Vecchia*, the bearing and distance are S.E. $\frac{1}{4}$ S. [*S.E. by E.*] $28\frac{1}{2}$ miles. The coast between forms a bay, the shore of which is low, but the country elevated. At about half-way between is the *River Fiora*, near to which, on the East, about two miles up the country, stands the elevated town of *MONTALTO*, having several large trees about it. At 7 miles to the northward of *Civita Vecchia* is *Porto Clementino*, at the mouth of the *River Marta*; 3 miles within which, on a rising ground, is the town of *CORNETO*, appearing white, with several steeples and towers in it, which distinguish it from other places.

To the southward of *Port Clementino* are extensive salines. Two miles more to the south there stands on the shore the *Convent Agostino*, and beyond this the *Tower of Aliga*; the latter being 4 miles to the north from *Civita Vecchia*.

CIVITA VECCHIA.—In latitude $42^{\circ} 4' 40''$ and longitude $11^{\circ} 45' E.$ stands *Civita Vecchia*, the principal sea-port on this side of the Roman territory, which may easily be found, on coming from the westward, by mean of the town of *Corneto*, standing to the northward, as already described, and by *Cape Linaro*, which lies at 5 miles to the southward. As the last stretches more into the sea than any other point hereabout, it may be readily known. It is high, has a square tower on it, and slopes down to seaward. As you approach you will discover the tower of the lighthouse and the town of *Civita Vecchia* at the same time. This town is well fortified with good walls and ditches, several half-moon batteries, and other works; and towards the sea stands a very fine castle upon a peninsula, from which a mole stretches out to a considerable distance. Opposite to the town is the *new mole*, about 180 fathoms long, built upon some rocks that are level with the water; at its end are two small hooks, pointing towards the land; on the N.W. end are some ruins, and on the other end stands the lighthouse. Over against the two ends of this mole are two considerable forts, or towers, to defend the entrances; they are about 80 fathoms from the points of the mole; but these towers enclose a large space, which is the Port of *Civita Vecchia*, where ships and galleys may anchor. You may run in at either of the entrances, according to the wind, observing to pass nearly in mid-channel, or rather nearer the new mole, close to which there are 12 feet of water: in the north entrance there are 17 feet, and in the south entrance upwards of 20 feet; but you must not go near the castle, on account of some rocks that stretch off from it under water.

In the bottom of the port is the basin, which is shut up with a chain. Ships anchor indifferently, either in the new mole or in the middle of the port, in 16 or 18 feet of water, sheltered from all winds; but strong gales from S.W. cause the sea to break over the new mole, and are otherwise very troublesome to the shipping in the mole. Good water may be had at the entrance of the town. If, at night, you cannot get into the port, you may anchor to the N.W. of the mole-head, at 3 or 4 cables' distance, in from 12 to 9 fathoms of water.

Two miles to the northward of the port of *Civita Vecchia*, is a point stretching out a little way into the sea, with a tower upon it; between are some rocks under water along the coast; and, about half-way between the lighthouse and *Cape Linaro*, is the *Torre Maran-*

Marangone, standing on the coast, opposite to which there are several reefs stretching off nearly a mile under water, of which you must be aware.

CAPE LINARO.—Cape Linaro should be approached with caution, as a reef extends from it to the S.W. three-quarters of a mile. When off the Cape you will see the *Tofa Peak*, on the high land of the interior, at 3 leagues to the north-eastward. Here, also, you may see the church and village of *Marinella*, which stand on the coast, at $3\frac{1}{2}$ miles eastward from the cape.

From *Cape Linaro* to the *Fiumicino* or *N.W. Mouth of the Tiber* the bearing and distance are S.S.E. $\frac{1}{4}$ E. [S.E. $\frac{1}{4}$ E.] $7\frac{1}{2}$ leagues. The land between forms a slender bay, with a sandy shore, having several villages, towers, &c. with numerous rivulets falling into the sea.

St. Severa, a small village by the sea-side, stands at the distance of 7 miles S.E. by E. $\frac{1}{4}$ E. from Cape Linaro. At a mile from the village, to the southward, is the tower of *St. Severa*. To the northward and north-eastward of this portion of coast the land gradually rises to the summit of a chain of mountains, which gradually decline to the south-eastward.

At 7 miles to the south-eastward of *Severa* is the village of *Palo*, which may be known by its having a large white magazine on the sea-side, and a village, *Ceveteri*, on an inland hill to the E.N.E. The *Torre Flavia* stands at two miles north-westward from *Palo*, on a point bordered with rocks. The *Torre Perla* at $2\frac{1}{4}$ miles south-eastward from the same, and the *Torre Maccarese* at two miles South from that of *Perla*, and two leagues North from that of the Tiber.

RIVER TIBER.—The RIVER TIBER, which flows through the city of *Rome*, has two outlets to the sea, which are divided by the *Isola Sacra*, a tract of wooded land about half a league in breadth. Of these, the first, or northernmost, is called the *Bocca del Fiumicino* (pron. *Fiumechino*), and the second *Bocca di Fiumara*. All the land near the sea, about the mouths of the Tiber, is low and marshy; it is not, therefore, readily made out. In moderately clear weather the dome of *St. Peter's*, at *Rome*, may be seen at a great distance off at sea; and, when it can be seen, this is the best mark for ascertaining your situation; for, when the dome bears E.N.E. $\frac{1}{4}$ E. [N.E. $\frac{3}{4}$ E.], it will be in a line with the N.W. mouth of the river.

This is the only mouth that vessels of any burthen can enter by, there being between 6 and 7 feet of water on the bar, and from 2 to 3 and 4 fathoms inside. It may be known by the tower of *Fiumicino*, which is square, with a lantern upon its top, and some houses and smaller towers near it. The south or *Fiumara* entrance may be known by an octagonal tower, with a small look-out house and flag-staff upon the top of it, which stand near it. Nothing larger than a boat can enter by this mouth, there being no more than 2 feet of water on the bar, with 4 and 5 feet inside.

NEW LIGHTHOUSES.—By a notice dated *Rome*, 12th of October, 1825, it was announced that a new light had been established on the *Clementine tower* at the mouth of the Tiber, in order to point out the mouth of the channel of *Fiumicino*; and another on the *Tower of Anzo*, on the same coast, which is 28 miles more to the southward. The notice states that the light is successively shown and concealed for equal intervals. The reflectors enlighten the sector comprised between Cape Linaro and Cape Anzo. The successive occultation and bright light of *Fiumicino* may be distinguished by the naked eye from *Palo*, that is to say, at the distance of about 11 nautic miles.

There is good anchorage, with off-shore winds, and, in the summer season, from 3 to 6 miles W.N.W. or N.W. by W. from the tower of *Fiumicino*, in from $6\frac{1}{2}$ to 13 fathoms of water, stiff mud, and good holding ground.

Water may be obtained from the river, but boats ought to go well up before they fill it, otherwise it will be brackish.

In case of necessity, beef and other refreshments may be had by application to the British Consul at *Rome*; although dearer than usual, from the distance, which is 14 or 15 miles.

From the *Fiumara Mouth* to Cape d'*Anzo*, the bearing and distance are S.E. by S. [S.E. $\frac{1}{4}$ E.] 28 miles. The land between forms a slender hollow, is very low near the sea, and has several houses and towers upon it. From the *Torre S. Michele*, on the eastern side of the *Fiumara* entrance, these towers stand at the following distances:—

Torre

Torre di Paterno, 10 miles; Torre Vaianica, 12; Torre St. Lorenzo, 20; Torre di S. Anastasio, 24; Torre di Caldano, 25; and Torre d'Anzo, 28.

From Cape d'Anzo north-westward, to Palo, the coast of the *Campagna di Roma*, or Plain of Rome, is frequently so obscured by haze and fog, that the objects on shore are not distinguishable: still less is the land, upon which there are several marshes and lakes. It is also to be noticed that the current here generally sets towards the shore, and for this a proper allowance must be made.

CAPE D'ANZO is a projecting point, whence the land trends to the east. Its position is, lat. $41^{\circ} 27'$, long. $12^{\circ} 42' E.$ The light-tower on its extremity is large and square, and some rocks are near it. The tower of Caldano, which is round, may be seen when you are to the south-eastward of Cape d'Anzo.

Near Cape d'Anzo, to the eastward of it, is a mole in form of a hook, constructed upon a sandy shore, out of the ruins of a fort built by the emperor Nero.

This mole is called PORT NETTUNO, or NEPTUNE; it stretches about 200 fathoms into the sea to the southward, and at its end a hook stretches about 90 fathoms to the eastward, which shelters the vessels within it from the wind and sea: on the extreme end of the mole is a small square fort, with a tower in the middle of it. In the angle of the mole is another small fort like the former, near which are several magazines for the use of the harbour, and adjacent to them is a chapel. Between Cape d'Anzo and this mole was formerly the old port, but the ruins of a fort are scattered about in several places, some of which appear above water, and the port is entirely choked up with sand. To sail into the port, from the westward, give the above-mentioned ruins a good berth, because many fragments of them lie under water, and afterwards sail along by the point of the mole where the lighthouse stands: when in, you may anchor at discretion with your starboard anchor, and moor with a sternfast to the east part of the mole; by this mean you will lie with your stern to the mole to seaward, and your head towards the shore. Being moored close to the mole-head, you will have 16 feet of water; within, the water is deeper, and the ground is mud and sand: here is room for eighteen or twenty galleys, and you are safe from the winds and the sea: the E.N.E. winds are the most troublesome, but, as they blow over the land, they cause no sea. From the head of the mole, about 100 fathoms towards the shore, there are from 15 to 20 feet of water, so that there is nothing to prevent you from mooring on that side; but you must not go farther in than the magazines, which stand on the great mole. Near the middle of this mole is a fountain with several pipes, where excellent water may be had without going out of your boats; there is also a handsome fountain near the beginning of the mole, beyond which is a large house, serving as a mark to know the port by, when you are at sea.

The town of NETTUNO, (or NEPTUNE,) is nearly two miles East from the mole; it is small, but antient, and stands by the sea-side, on a sandy shore; at about one-third of the way is a magnificent palace, and all about, from Cape d'Anzo to the town, are several vaults, grottos, baths, and pillars, hewn out of the rocks, with other monuments of antient magnificence.

The Lighthouse of Cape Anzo is noticed on the preceding page.

MOUNT CIRCELLO, or CIRCEO, is 7 leagues S.S.E. $\frac{1}{2}$ E. [S.E. $\frac{1}{4}$ E.] from Cape d'Anzo; the land between forms a bay, with a low marshy coast. At 4 miles S.S.E. $\frac{1}{4}$ E. [S.E.] from Nettuno stands the tower of *Astura*, upon a point which stretches a little way into the sea, having a small river near it to the eastward. *Mount Circello* is a high mountain, $2\frac{1}{2}$ miles long, and projecting a great way into the sea; it may be seen from a great distance, whence it resembles an island, because the land is low to the northward of it; it is very steep to the southward, and near it are two watch-towers. About one mile to the eastward of the southern point, is a square tower, *Torre del Fico*, upon a low sandy point, and a village about it, called *St. Felice*; between this tower and the point of Circello, where stands another tower, *Torre Cerva*, you may anchor in 6 or 7 fathoms of water, on sandy ground; but you may not approach near the square tower, because a point of rocks stretches off from it, under water, two cables' length or more; neither may you suffer yourself to be surprised by the sea-winds, from which you here have no shelter. You may also anchor, in case of necessity, on the N.W. side of the mount.

TERRACINA.—At the distance of 3 leagues, to the eastward, from Monte Circello,
is

is *Terracina*, the last town on this coast within the limits of the Popedom. The coast between is very low, with a sandy shore, but the town stands on a moderate height: near it, to the eastward, is a considerable lake, communicating with the sea, by two outlets, which are divided by a salt marsh, one league in length.

Terracina was antiently *Anxur*, the capital of the Volsci: the Geeeks called it *Trachyna*, whence its present name is derived. The country around is fruitful, but marshy and unwholesome. The harbour, once famous, is now choked up; and the town, though fortified, is inconsiderable.

The ISLANDS PONZA, PALMAROLA, ZANNONE', VANDOTENA, &c.

PONZA.—Of this group of Islands Ponza [Ant. *Pontia*] is the chief, and its north end lies $5\frac{1}{2}$ leagues S.S.W. $\frac{1}{2}$ W. [*S. by W.*] from Cape Circello. It is long and narrow, being four miles in length, by half a one in breadth, curved in shape, with its convex side or bank to the west. It contains a village and considerable salt-works. The land is irregular and very high, especially toward the south end; it may be seen at a great distance, and appears from the westward like several islands. At a short distance from the N.E. end of Ponza is a small but high islet, called *La Gabia*, with a passage for boats only between.

The western side of Ponza is rocky, and the rocks extend to a mile from the central shore.

Ponza Road is on the S.E. side of the island, at a mile N.E. from the South point. Here galleys and other small vessels may anchor. This road is defended by a small fort, off the S.E. point of which is a large rock above water, with a depth of 15 fathoms between; there is also another rock above water, close to the shore, which is higher than the former, and has several small ones about it. Beyond the fort is a mole, and a small cove with very little water.

Le Formiche, a cluster of rocks above water, lies at the distance of half a mile from shore, at three-quarters of a mile to the E.N.E. from Point della Guardia, the south point of Ponza. The water is deep in the intermediate channel, but the safest way is to haul round the rocks to the eastward.

ZANNONE'.—The ISLAND ZANNONE' lies at the distance of $2\frac{1}{2}$ miles E.N.E. [*N.E. $\frac{1}{2}$ E.*] from *La Gabia*. It is a mile in length from East to West, and half a mile broad, very high, and not inhabited. At a quarter of a mile from its S.W. side is a reef of sunken rocks, and between it and *Gabia* are several high rocks, of which the nearest is half a league from the S.W. side of Zannoné. This rock is called *Scoglio Grande*, or *Great Rock*; between are from 10 to 20 fathoms of water.

At half a mile to the south-westward of the *Scoglio Grande* is the rock called *Chiana de Mezzo*; and, in the same direction from the latter, is another called *Le Scoglietelle*, which is at one-quarter of a mile from *Gabia*, and has some smaller rocks at its western end. You may safely pass between Zannoné and the *Great Rock*, but the usual passage to the road of Ponza is between *Gabia* and the rock nearest to it; this being three cables' length wide, and 10 to 15 fathoms deep; and you may pass close to the land or the rocks.

PALMAROLA.—The ISOLA PALMAROLA [Ant. *Palmaria*] lies about four miles to the westward of Ponza. It is a mile and three-quarters in length, from north to south, and uninhabited. It has rocks above water both at the north and south ends, of which one, off the south end, is half a mile from shore. There is also a sunken reef, extending a mile S. by W. $\frac{1}{2}$ W. [*S.W.*] from the same end of the island.



Appearance of Palmarola and Zannoné when Ponza is shut in by the former.

The *Scoglio*, or Rock, called *LA BOTTE*, lies at the distance of 7 miles S.E. $\frac{3}{4}$ E. [*E.S.E. $\frac{1}{4}$ E.*] from the south end of Ponza. It is a large rock, over which the sea breaks in tempestuous weather, but close to which there is from 53 to 60 fathoms of water.

VAN-

VANDOTENA.—The *ISOLA DI VANDOTENA*, [*Ant. Pandataria*,] which lies nearly 7 leagues S.E. by E. [*E.S.E. $\frac{1}{2}$ E.*] from the south end of Ponza, and 29 miles S.S.E. $\frac{1}{2}$ E. [*S.E. by S.*] from Cape Circello, is about two miles in length, and one in breadth. It has a reef on the north side, at some distance from shore, and a village with a fort stands on its eastern side. At three-quarters of a mile from this end is an islet, named *St. Stefano*. All round the water is deep, at a short distance. »



Appearance of Vandotena and St. Stefano, the former bearing N. $\frac{1}{2}$ E.

THE NEAPOLITAN COAST.

GAETA, the ancient *CAIETA*, stands on the point which divides the Bays of Terracina and Gaeta, at the distance of 8 leagues E.S.E. $\frac{1}{2}$ E. [*East*] from Cape Circello. On the coast between, besides *Terracina*, already described, are several villages, &c. Between Terracina and Gaeta the land is high, and there are watch-towers on its projecting points.

The promontory, on which Gaeta is situated, is connected to the main by a low and narrow isthmus, to the eastward of which is the anchorage. The fortifications about the town are considerable; but it has, nevertheless, been several times taken and retaken, particularly by the French, in 1797, by the English and Allies, in 1799. The sea about it abounds in fish, especially sturgeon, of the roes of which *caviar* is made, so highly esteemed by the Italians. Gaeta is a mile in extent, exclusive of a suburb to the north-west; most of its streets are very narrow, and the houses built on porticoes. The neighbourhood around is very pleasant, and its soil exceedingly fertile. The citadel, built on an eminence, commands the city.

GAETA may readily be known, on approaching from the westward, by *Monte la Trinità*, on the W.N.W., to the westward of which is a sandy cove, *Cala di Serpa*. This mountain is steep, and cleft from the top to the bottom, about a fathom in width: at its foot, to seaward, is an oratory, and near the cleft is a convent of friars. As Gaeta is built on a very steep point towards the sea, which forms the larboard entrance of the bay, the town and several fortifications show to leeward, and a conspicuous object is the *Torre d'Orlando*, on the summit of the high land, westward of the town.

The anchorage to the northward and N.W. of the town, with from 10 to 12 fathoms, is spacious. The place for galleys is near the town, but you must not go farther in than half-way of the walls, for, beyond, the ground is shoal and rocky. In the middle of the bay the water is deep, and the situation open. The most troublesome winds here are those from the N.E. to the East.

At 2½ miles to the northward of Gaeta Point, on the sea-side, stands a considerable village, *Castellone*; adjoining to which, on the east, is another, *Mola*. On the west of the first is a small rivulet, where good water may be obtained.

From *Gaeta to Cape Mesa* on the N.W. side of the Gulf or Bay of Naples, the bearing and distance are S.S.E. [*S.E. $\frac{1}{2}$ S.*], 10½ leagues. The land between has a bay-like form, and, as far as three leagues from Gaeta, eastward, to the *River Galigniano*, it is high. The shore thence south-eastward, two leagues in extent, is low, until it reaches the high lands in the vicinity of *Monte Massico*, at the foot of which, to the South and S.W., is the village and tower of *Mondragone*. At 5½ miles to the southward of the latter, and 18½ miles S.E. $\frac{1}{2}$ S. [*S.E. by E.*] from Gaeta, is the mouth of the *River Volturno*, nearly a mile to the southward of which, on the low sandy shore, is the tower of *Volturno*: from this tower a shoal and reef extend three-quarters of a mile to the north-westward.

At a mile to the northward of the tower, on the south bank of the river, and at three-quarters of a mile within the entrance, stands *Castel Volturno*; and, at 7 miles to the southward of it, there is another tower, called *Torre di Patria*. At a mile to the southward of the last is the mouth of the small *River Patria*, which communicates with the Lake, or *Lago di Patria*. The distance hence to *Cape Mesa* is exactly two leagues: the

the land variegated and increasing in height. Cape Mesa is a very high point; and, upon a rising part of it, to the southward, is a round watch-tower, off which is a small islet, the *Scoglio S. Martino*.

The GULF or BAY of NAPLES.—The *GOLFO DI NAPOLI*, or, more properly, the BAY of NAPLES, is distinguished, at its entrance, by the Islands ISCHIA and PROCIDA to the N.W., and by the Island CAPRI and the promontory of CAMPANELLA [Antiently that of *Minerva*] to the S.E. The breadth of this entrance is 5 leagues.

The Bay of Naples is considered, altogether, as the most beautiful and interesting bay on the face of the globe. Its curiosities, both of nature and art, its remains of classical antiquity, its varied and wonderful scenery, its volcanic eruptions, earthquakes, cities founded, established in all the pride of luxury, and overwhelmed; mountains converted into lakes and lakes into mountains, form a combination of circumstances and events, which is no where else, on an equal space, to be found; and its shores have, therefore, exercised the descriptive pens of many writers.

One of these says, “After a lapse of many centuries, the vestiges of the terrible subterraneous fires that convulsed these coasts are still visible. The Lakes Acheron, [*Mare Morto*,] Avernus, [*Averno*,] and others that border the sea, are incontestibly the craters of antient volcanoes, as well as the enormous cones reversed, which are every where seen on the shores, on the summits of the mountains, on their sides, and at their feet. The remembrance of the most antient convulsions was conveyed by tradition, and, being embellished by the poetic imagination of the Greeks, whose colonies were established on these shores, from them was formed the mythology of the infernal gods. The yawning fissures, several of which still showed the existence of internal fires, by the smoke that issued from them, while others emitted pestilential vapours, were easily conceived to be the gates of Tartarus, and the entrances to the realms of death. Temples were erected on their edges, at which the worshipers arrived by subterraneous passages; and hence the fables of the Sybils, and the descents to the infernal regions.

“Nature having reposed for ages, the fertility of these countries was renewed, and men, invited by this fertility, as well as by the serenity of the climate, crowded to their shores. The city of *Cumæ* was founded, probably by a colony of Greeks. Other cities succeeded, and formed so many petty sovereignties, sometimes at war with each other, sometimes allied, until all were, at last, absorbed in the Roman empire.

“The Romans, masters of the known world, and enriched by the spoils of the East, thought only of enjoyment. Tired of the monotonous splendour of the capital, they sought in the country the charms of tranquillity, united with luxury. But no part of Italy offered such natural advantages as the shores of the Bay of Naples; blessed with a genial climate, a serene sky, beautiful scenery, and possessing abundance of warm springs for the formation of baths, become necessary to the now effeminate Romans, these shores were gradually covered with villas and temples, and from Cape Miseno to Sorrentum [*Sorrento*] seemed to the eye but one continued city. Within this extent were the towns of Misenum, Baia, Direachea, or Puteolis, [*Pozzuoli*,] Neapolis, [*Naples*,] Herculaneum, Pompeii, Stabia, and Sorrentum, each of which had its theatre, amphitheatre, forum, and an incredible number of temples, whose ruins attest their magnificence.

“In these circumstances of pomp and splendour, frequent earthquakes at length alarmed the voluptuous inhabitants, and were the precursors of a dreadful crisis. Vesuvius at that time presented the appearance of an antient volcano, but nothing indicated that its fires were not entirely extinct; its sides were highly cultivated in their whole circumference, and its summit alone appeared arid and burnt. In the first year of the reign of Titus [A.D. 79] its fires burst forth suddenly; rivers of fluid lava and mud issued from it, as well as clouds of ashes and pumice-stone, which overwhelmed all the eastern shore of the bay, and from Herculaneum to Stabia, a chain of hills, composed of these substances, occupied the place of fertile fields. These two towns, as well as Pompeii, disappeared, while the western shore suffered nothing, the lava stopping at Naples, which itself received but little damage.

“The nobles of Rome, however, continued to pass a part of the year on the shores of Naples, and the epoch when they were generally deserted is unknown, but it is supposed to have been during the ages of barbarism that succeeded the fall of the Roman empire. The appearance of the shores, and the ruins that cover them, from Cape

Miseno to Pausilippo, [*Posilipo*.] attest the ravages of one or more convulsions posterior to that in the reign of Titus. The mountains have been torn into fragments, the passages to the subterraneous temples filled up, and the temples themselves either destroyed or displaced; while, also, it is particularly evident that the sea rushed with rapidity over the land, from which it is now again slowly retiring. The only convulsion of which the date has been preserved is that of 1538, in which the *Lucrine Lake*, so famous for its oysters, was greatly reduced, and a mountain rose in its place."

Before entering on the *Sailing Directions*, we shall prefix a few remarks which have been made on the present appearance of the coast, &c.

On the *N.W. side, between Cape Miseno and Pozzuoli*, is a sterile and mountainous coast. Cape Miseno is a block of tufa, or lime-stone, of considerable height, and was evidently a volcano, the crater of which may still be traced on the south, though nearly worn away by the action of the sea. In the interior of the mountain are vast caverns and subterraneous streets, supposed to have been magazines for the Roman fleets, which rendezvoused in a port sheltered by the cape, the piers of which are still seen level with the water. The remains of the town of Misenum, situate on the cape, consist of a theatre and the ruins of some monuments. On the north of the cape is the *Porto di Miseno* and *Mare Morto*, [*Ant. Acheron*.] abounding with eels and barbels.

The ruins of some grand buildings on the shore and under water, at $2\frac{1}{4}$ miles to the northward of Cape Miseno, exhibit the site of the voluptuous *Baia*; opposite to which, on the east, is *Pozzuoli*. Within half a mile eastward from *Pozzuoli* is the *Solfatara*, or Sulphur Hill. The vapours which exhale from the various craters, from the *Solfatara*, from the lakes and hot springs, and from the marshes formed by the waters, which antiently flowed in superb aqueducts, infect the atmosphere of these shores; and hence, between Cape Miseno and *Pozzuoli* there is scarcely a habitation. The more healthy situation of the latter, on a point of land advancing into the sea, has retained some inhabitants; beyond it, to the eastward, the scene improves, and the isle *Nisita* is seen covered with verdure.

The *Lago d'Averno* and *Lago Lucrino*, at the bottom of the Bay of *Baia*, to the *N.W.* are surrounded by elevated grounds, and having in some parts a considerable depth, they might be formed into a good harbour, by cutting a communication with the sea, less than half a mile in length. The poisonous qualities ascribed to these waters, by the antients, no longer exist; for they now possess fish in abundance, the birds fly over, and men bathe in them with impunity. The *Lago Lucrino*, which is to the southward of the *Averno*, covers three or four acres, and is distant from the sea about 10 yards, a sluice forming the communication.

In rounding the north shore towards *Naples*, a new scene opens to the eye, the shore being thickly dotted with noble buildings, in the midst of beautiful plantations. The city of *Naples* presents itself, rising amphitheatrically on the side of a mountain, and beyond it a vast plain, richly cultivated, and watered by the winding rivulet *Saboto*. On the eastern side of the bay, *Vesuvius*, with its double summit, rises, in majestic solitude, from the surrounding plain, and two-thirds of its height are cultivated, the summit only being bare of vegetation: on its sides and at its foot are scattered villages and villas, built on the lavas of successive eruptions, which time has converted into the most fertile of soils. But, while the eye rests with complacency on this smiling prospect, a sentiment of melancholy cannot fail to accompany the remembrance that, many fathoms deep, lie buried the palaces and gardens of some of the antient masters of the world. *Portici*, three miles to the *S.E.* from *Naples*, is built over, or nearly over, *Herculaneum*, which, as well as *Pompeii*, has been for many years exhuming, or uncovering, so that now the traveller, with a feeling of astonishment and veneration, walks in streets and enters houses which have laid buried for seventeen centuries. These overwhelmed cities are chiefly built of, and paved with, lava, and beneath their foundations are several alternate strata of this substance and of vegetable soil, in which the remains of plants are discovered; whence it seems highly probable that, long before the establishment of the people whom we call *antients*, on these coasts, nations absolutely unknown to them, as well as to us, inhabited this soil, and were driven from it by great physical convulsions.

The late Mr. Chetwode Eustace, in describing his route on the shore from *Naples* to the town of *La Torre dell' Annunziata*, says, "This road, along the shores of the bay, we had very often passed, but no familiarity with it can deaden one to the sense of its beauty;

beauty ; the immediate vicinity of the scorched Vesuvius, rising stark into the blue sky ; the smoke emitted lazily from the crater, and rolling slowly down its sides, or floating away in long dull masses ; the black stripes which, from the summit to the base, descend in every imaginable distortion ; the strange lights and shades which chequer the whole breadth and height of the mountain ; the smiling green vineyards, and white towns and villages, which are belted around its base : and the consciousness that those vineyards may be in flames, or those villages in ruins, before to-morrow's sun flashes across the bay : such objects, and such reflections, inseparably united with them, can never entirely lose their hold on the heart. At the Torre there is a tolerable inn, tolerable at least for the kingdom of Naples ; we secured beds for the night, and dined there, and then walked on to *Pompeii*, which is about a mile distant, to spend again a few hours in its impressive solitude."

The *S.E.* and south shores of the Bay of Naples, rise perpendicularly in volcanic cliffs to a great height, immediately behind which are high mountains, clothed with verdure to their summits, and their sides decorated with villages. On this side are *Castell'a Mare*, with its little haven, formed by a mole, where vessels of war are built, and two leagues farther, to the *S.W.*, is *Sorrento*, the antient *Surrentum*, one of the handsomest towns of the kingdom. Between is *Vico* and two other villages.

We shall now take the coast in detail, beginning with the island *Ischia*.

The *ISOLA D'ISCHIA*, the antient *Pithecura*, is $5\frac{1}{2}$ miles long, from East to West, and 3 broad. It consists of one large and several lesser hills, all formed by volcanic eruptions, and it abounds with metallic substances, has many hot springs, and is fertile, producing grapes, figs, oranges, pomegranates, chesnuts, aloes, &c. On its eastern side is the town, well-fortified, and having a good road, defended by a citadel on an insulated rock, connected to the town by a stone bridge, 200 fathoms in length. There are also several villages on the island, particularly *Foria*, on the western side ; *Lacco* and *Casamicciola* on the north ; *Panza* on the *S.W.*

Monte Epomeo, the mountain in the middle of the island, is very high. It was formerly a volcano, from which there was a dreadful eruption in 1301. This mountain is formed like a sugar-loaf, with white spots in some parts of it. Near the shore of *Ischia*, in different parts, are many scattered rocks.

On the western point there is a tower, and within it, on the *N.E.*, is the village of *Foria*, above-mentioned, which stands on a sandy bay, wherein galleys may anchor, sheltered from winds, between *S.S.W.* to East and *N.E.* ; but North, *N.W.* and West winds blow full in, and are dangerous. The western sea is, however, broken off, in some degree, by *Le Porchette*, a bank, one-third of a mile long, lying off the bay at three-quarters of a mile from the shore, and to the northward or southward of which vessels must pass for taking the road.

The town of *ISCHIA*, already noticed, lies on the *N.E.* side of the island, and the castle or citadel is to the eastward of it. This castle is high, steep, and fortified on all sides. Galleys may anchor on either side of the bridge, and carry fasts on shore toward the town, between which and the castle, on the north side, there are 3 or 4 fathoms of water, on oazy ground. Southward of the bridge are some rocks lying under water, near the castle, and others on the opposite side, off a point of the island. Those who would anchor near the bridge must pass between them. At half a league to the southward of the castle is a high point, *Capo d'Arco*, near which are some shoals which must be carefully avoided.

PROCIDA and *VIVARA*.—These isles lie between *Ischia* and Cape Miseno. *PROCIDA*, the antient *Prochyta*, is of very irregular shape, and its greatest breadth is $2\frac{1}{4}$ miles. The town occupies a considerable portion of the island, and the rest is covered with vines, fig and orange trees. The coasts are indented with semi-circular coves, of which the principal is toward the *S.E.*, where it forms a snug little harbour, which is defended by a castle. There are several fine palaces and country-seats on the island. The town is well fortified, and strong from situation : its point, to the *N.E.* and East, is very high, and steep to seaward.

At the foot of the castle of *Procida* is a reef above water, at full two cables' length from shore, with 3 fathoms of water close to it. Generally it is elevated some feet above the sea, but the waves break over it in rough weather. At other times the fishermen dry their nets on it. You may anchor under the town, to the north-eastward of it,

in

in 4 and 5 fathoms; but not too near the beach, as there the water is shoal. N.E. winds blow full in here.

The S.W. end of Procida is a mile and a half from the Castle of Ischia, and between, but near to Procida, lies the little island *Vivara*, which is nearly a mile in length. There is a good passage between the castle of Ischia and this island, above a mile in width, with a depth of 12 to 15 fathoms; but it is necessary to keep nearest to the castle, where you will have 7 or 8 fathoms of water, and thus you will avoid a ledge of sunken rocks, which lie at about 600 fathoms to the westward of the N.W. end of Vivara, and near to which the depth is only 3 fathoms.

Between Vivara and Procida is a good harbour, open only to the South and S.E. winds, and in the middle of which there is good anchorage for small vessels, in 4 and 5 fathoms of water, bottom of sand and weeds.

From the N.W. end of Vivara to that of Procida, the distance, towards the N.N.E., is half a league. The coast between forms a slender bay, divided in the middle by a reef, which extends from shore to the westward nearly a quarter of a mile. A similar reef extends from *Punta di Pozzovechio*, the N.W. point.

From the N.W. point to the north point, called *Punta Chiuppeto*, the distance, eastward, is rather more than half a mile. About the latter are several rocks above water.

CAPE MISENO, &c.—Cape Mesa, which has been already noticed, lies at the distance of a mile and three-quarters N. by E. $\frac{3}{4}$ E. [*N. $\frac{1}{4}$ E.*] from Chiuppeto Point. To the northward of the watch-tower, which stands upon this cape, is the *Scoglio S. Martino*, or Islet of St. Martin, which is moderately high, and has a square tower on it. There is no passage between this islet and the main, and there are sunken rocks to half a cable's length around it.

From Cape Mesa to Cape Miseno the distance to the south-eastward is $3\frac{1}{2}$ miles. In the first half of this distance the land is high, but thence it forms a bay with a low sandy shore, where there is anchorage in 5 and 4 fathoms of water, bottom of sand and weeds, and sheltered from N.W. to N.E.

It is to be noticed that, at about half a mile to the southward of Cape Mesa is a dangerous reef, called *Tavola del Rey*. Near it is a depth of 12 feet. You will clear it by passing the coast at not less than half a mile, or by keeping the east end of Procida S. $\frac{1}{2}$ E. [*S.S.E.*] until you are in mid-channel.

CAPE MISENO is a very high long point, which has two square watch-towers upon it, near each other, and a large house; near its end is a rock above water, close to which is a depth of 13 fathoms.

To the north of the promontory of Miseno is an inlet, *Porto di Miseno*, formerly a good harbour, within which is the lake *Mare Morto*. In the harbour, galleys still may anchor. On the north side of it, extending to the E.S.E., is a long low point of even rocks, resembling a work of art; these are above water, but at their end are several under water, extending a cable's length to the S.E., which you must be careful to avoid. On the south or larboard side are five *brick pillars*, being part of a Roman mole or bridge; they are level with the water, and on the side stands a fisherman's storehouse, with a chapel above it. At the bottom of this harbour is a large sheet of water, not above 4 or 5 feet deep, and beyond it the lake, where formerly stood a town, which has been swallowed up; this lake has a communication with the sea by a sluice in the bottom of the harbour. To sail into the port of Miseno, you should not attempt to enter until you have its mouth well open; then sail as near as you can to the pillars before-mentioned, where you will have 4 or 5 fathoms of water: on the starboard side you will see the ruins of several houses under water, which have been sunk by earthquakes; these you must keep clear of. Continue running in to the end of the harbour, and anchor a little within the fisherman's house, which stands on the larboard side, in 3 or 4 fathoms, on oaze and weeds; but go not beyond a little hill of rocks, for the water becomes suddenly shallow; neither should you come within a cable's length of this shore, because of the houses which you will see under water. When you are got into the port, as above directed, you will lie safe from all winds. The S.E. wind blows full in the harbour, and, with a fresh gale, you will not be able to get out, because of a great swell, which breaks all across the entrance.

BAIA.—At a mile and a half to the northward of Punta de Penati, which is the north point of Port Miseno, is the castle of BAIA, standing on a steep point, off which is

is a rock level with the water, with a battery on it. At about three-quarters of a mile northward [*North by West*] from this point is a very conspicuous point, called the Point of the *Baths*: the shore between forms a bay; and, nearly mid-way, on a low point, is a battery, off which, about a cable's length, is a ledge of rocks, with only 4 feet of water over them: there are, likewise, several rocks around the battery, but especially towards the point of the Baths, which stretch out about $2\frac{1}{2}$ cables' length.

The best anchoring-place in the *Road of Baia* is between the two batteries, (which are level with the water,) at about two or three cables' length from the shore, in from 9 to 5 fathoms, on oaze and weeds: the first anchor is generally let go, according to the wind, in 10 or 12 fathoms: but do not advance too near the point of the Baths, lest you touch on the rocks or ruins above mentioned. You may lay out your second anchor towards the castle of Baia; but there is a rock under water, between a house, which is below the castle and the anchoring-place, which you must be aware of, lest it should cut your cable. In the bottom of this small bay, beyond the large battery, between it and the point of the Baths, is a sandy beach, off which you may anchor in 3 fathoms of water, good ground; but it is necessary to be well acquainted with the rocks, which, as before said, lie on both sides under water, and pass between them and the other rock, which is almost level with the water, opposite to the battery, leaving this last on your larboard hand, as likewise the battery, which you must not approach. You may anchor within the battery, in 3 or 4 fathoms of water, on sandy ground, and carry fasts on shore, with a good anchor down to the eastward [*E.N.E.*].

To avoid the dangers on both sides, you should lie with your stern towards *Pozzuoli*, and your head towards two pillars, which you will see on a sloping side of the mountain, above a temple, in the bottom of this shore: there is another near the sea, built of bricks, formerly dedicated to Mercury; and, near the point of the Baths, is the ruins of one dedicated to Venus. Near the middlemost, or brick-built temple, is another very large one, half in ruins, in which the voice circulates along its walls, as it does in the whispering-gallery of St. Paul's, in London. On the top of the point of the baths is a large inscription on white marble, and, towards the sea, are several subterraneous passages, hewn out of the solid rock; they extend a great way into the mountain, and lead to several baths of mineral-waters, and to several apartments both to the right and left. Here also, is, on one side, a bath of hot-water, called the *Bath of the Sun*; and, close to it, another extremely cold, called the *Bath of the Moon*: beyond these, are those of the *Cumean Sybil*, near the castle of Baia.

POZZUOLI.—This town lies about $1\frac{1}{2}$ mile E. $\frac{1}{2}$ S. [*E. by N.*] from Baia Castle: the land between forms a deep bay, but is rendered dangerous by the ruins of houses and towers, and of several rocks, many of which are nearly level with the water, and lie a great way from the shore, having 7, 8, or 10, fathoms near them. The coast is sandy between the point of the Baths and these ruins: and, behind it, is the Lake of Lucrino, in the middle of which there are 30 fathoms of water, where a town formerly stood.

Pozzuoli is now a small town, situated upon a low point by the sea-side, and is famous for its magnificent structures, built by the Romans: there are yet to be seen the pillars, or ruins, of a mole, now called the Bridge of Caligula, and extending towards Baia; there are 6 fathoms of water close to the westernmost of them. Both ships and galleys anchor before the town, to the northward of these ruins, opposite a sandy beach, at about two cables' length off, in 10 to 4 fathoms of water, mud and weeds, and fasten a hawser to the pillars. You must not go near the shore to the northward, because the water shallows quickly: the out-winds cause a great swell of the sea. About half a mile to the eastward of the town is the *Solfatara*, or Sulphur Hill, where the inhabitants collect brimstone.

NISITA ISLAND.—From Cape Miseno the Isle of Nisita lies East [*E.N.E. $\frac{1}{2}$ E.*] one league, and, from Pozzuoli to the same island, the distance is a little more than two miles. Between Pozzuoli and Nisita is a wide bay, with a sandy shore, where, in case of necessity, you may anchor with land-winds; but be cautious that you are not caught with the sea-winds; for all the shore is skirted with rocks, both above and under water, so that it cannot be approached: in the bottom of the shore is a very fine plain, with several antient baths upon it.

Nisita is high and covered with trees, and lies about a quarter of a mile from the coast to the eastward of it; a large fortified tower stands on the highest part of the island; and, to the S.W., is a small creek, in which two galleys may anchor in 3 or 4 fathoms

fathoms of water. To the northward of the island are the remains of a small mole, part of it being under water: you may anchor with galleys near the mole to the eastward, in 3 to 5 fathoms, mud and weeds. Midway between the island and the main land, is a long steep rock, with an Infirmary on it, opposite which, on the island, are some houses near the sea, and a kay for landing; but you cannot pass between this rock and the island, unless in boats, because of the ruins of a bridge; neither is there a passage for any thing but boats between the rock and the main. To the eastward of Nisita, about a mile, is the point of La Gajola, very high; and, off its end, is a small island, with a shoal; but there is no passage between, except for boats: upon this island are the ruins of a tower; and, towards the coast, a temple, called the *School of Virgil*.

REMARKS on the BAY of BAIA, by a BRITISH OFFICER.

"In the Bay of Baia, the entrance of which is between Mount Miseno and the Island Nisita, there is good anchorage. The bay extends N.W. and S.E., and is well sheltered from the winds, excepting those from the E.S.E. to South, which face the entrance, and it is exposed to the sea only by the passage between Capri and the main, which is of little or no consequence.

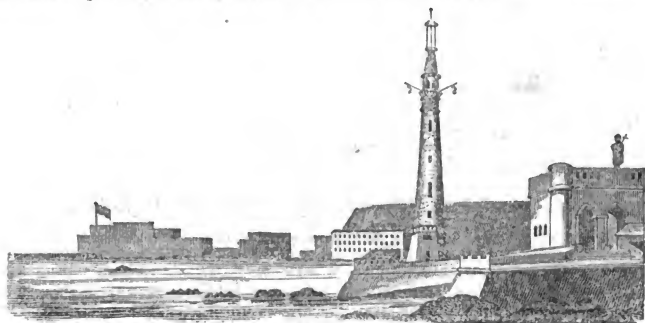
"In sailing inward, you must keep the western shore aboard; and, after passing the town of Pozzuoli, or Caligula's Bridge, in standing to the eastward, never open the passage between the Island of Nisita (the Quarantine Island) and the main; nor go higher up the bay than to bring a remarkable umbrella-tree, which stands on the summit of a hill, on the larboard hand, on with the south end of the white house, or cooperage, to the northward of the jetty. The best anchorage is in 5 or 6 fathoms, with the low fort of Baia on with the east end of the Island of Capri; the Island of Nisita S.E. by E., and the town of Pozzuoli East, at about $2\frac{1}{2}$ or 3 cables' length from the fort: here you will have good holding-ground. The only place for fresh-water is at the *Pratique House*, which is at the foot of the high fort, bearing from the above anchorage about S. by W., but it is scarce, and not very good. Provisions and wine are brought from Naples. Wood may be had, in small quantities, by purchase: vegetables, fruit, and other refreshments, are abundant."

NAPLES.—From the point called La Gajola, to that of Posilipo, the distance is rather more than a mile; the coast between is moderately high, and overspread with large houses: there are several others along this coast, level with or under the water, likewise several rocks under water, a great way out; for which reason you should keep, at least, a mile from the shore. At the point of Posilipo, which is known by a very large white house on its top, you begin to discover the city of Naples, as you sail along shore; but you must take care to avoid the dangers, which lie off this point, consisting of pillars, houses, towers, &c., which have been sunk by the earthquakes; you may, however, pass about two cables' length from these dangers, in 3 or 4 fathoms of water, and shortly after have 10 or 12 fathoms.

About $2\frac{1}{2}$ miles E.N.E. [*N.E. $\frac{1}{2}$ E.*] from the *Point of Posilipi* stands the Castle dell Ovo, upon a rock; between, the land forms a deep hollow; and, about half way is a large point, covered with palaces and magnificent buildings, with a church called *Sta. Maria del Porto*. Between this point and *Castle dell Ovo* is a large sandy beach, all along which are stately buildings, and a long row of trees, which compose the finest walks about the city of Naples: this place is called *Chiaga*. In the middle of the landing-place is a chapel, nearly surrounded by the sea, called the chapel of *St. Bernard*; and, at the end of the beach to the westward, is the entrance of the *Grotto of Pozzuoli*, cut through a high mountain, which has a village and a forest of trees upon it.

The CITY of NAPLES, famous for its beauty, stands in a fine plain near the sea: it abounds with splendid churches, palaces, forts, and castles, especially towards the sea; one of which stands upon a rising ground above the city, called the *Fort of St. Elmo*: this fort commands the whole city, and near it is a *Carthusian convent*. By the sea-side, before the city, is an antient castle, called *Castle Nuovo*: it is a considerable fortification, and returns the salutes which foreigners make to the city. Near it, to the westward, is the royal palace, which is very magnificent; and, adjoining it, is the arsenal for building frigates and vessels of an inferior class. The basin is near the arsenal, and can contain 10 or 12 galleys, defended by an antient tower, which is in good

good condition, and some other works. The Castle dell'Ovo, before mentioned, is the outermost work belonging to the city: it stands on a point of rocks, and is well fortified on all sides. Before the city there is a mole, almost in the form of the letter L, upon the elbow of which stands a high brick tower, or *lighthouse*, which is lighted every night; and, on the extremity of the mole, is a very good fort, and, near to it, a gun and bomb battery. The entrance to the mole lies to the N.E., and in it are 3 or 4 fathoms of water: it is spacious, and capable of containing a great number of vessels, whereof frigates and large ships lie near the mole-head, and smaller vessels lie nearer in towards the city, where there is less water. You lie here secure from all winds; but those from the south-westward bring in a great swell. Small ships frequently anchor on the outside, near the mole-head; but ships of war generally lie farther out, about a mile to the southward [S.S.E.] of the lighthouse, in 30 or 35 fathoms of water.



Castello dell' Ovo.

Sketch of the Lighthouse, &c.

Castello Nuovo.

REMARKS on the BAY of NAPLES, by MR. WM. SMITH.

THE Bay of Naples lies between the Islands of Ischia and Procida, and Cape Miseno on the N.W., and the Island Capri and Cape Campanella on the S.E. sides. In steering for this bay, from the eastward, make the Island of Capri, which is high and rugged, and lies 3 miles West, southerly, from Cape Campanella. There is a good passage between, which may be used according to the winds.*

In advancing from the westward, steer for the Island Ischia, which is high in the centre, and slopes down on all sides. In moderately clear weather, it may be seen at the distance of 60 or 65 miles. There is a good passage through between Ischia and Procida, and also between Procida and Cape Miseno. That between Procida and Cape Miseno is more than a mile wide; and has no less than 7 fathoms of water in it, in mid-channel.

If bound into Naples Bay, after having the bay open, and Mount Vesuvius can be seen, (which generally shows a light by night, and a thick smoke rising from it by day,) bring it to bear N.E. by E., then steer for it, or keep it a little on the starboard bow, which will lead you in until you get sight of the city of Naples: you may then steer for the city, and take up an anchorage. In coming in by night, steer into the bay until you get sight of the light on the mole-head; bring that light to bear N.N.W. $\frac{1}{2}$ W. or N.W. by N., then steer for it, and keep your lead going, and anchor in what depth you please, from 20 to 14 fathoms. There is no danger in going in or out of this bay, consequently pilots are not required.

The best anchoring-marks are, Fort St. Elmo on, or a little open to the westward of, the lighthouse on the Mole-head, and Posilipo point a sail's breadth or two open to the southward of *Castle dell' Ovo*, in from 18 to 14 fathoms of water, mud and clay. There are several wrecks in this bay, near or on one of which his Majesty's ship *Tagus*

* This channel is described hereafter.

lost an anchor, on the 5th of December, 1817; and, near or on another, his Majesty's brig *Satellite* also lost an anchor, on the 25th December, 1817. By observing the above anchoring-marks, you may be sure of being inside, and clear of them.

Winds that occasion the most sea here are from S.S.W. to W.S.W.: here is a mole, in the form of the letter *L*, in which merchant-ships and most of the Neapolitan navy lie, and where boats may always land. Here is no regular tide, but a rise and fall of water, occasioned by the winds in S.W. gales. There is a strong outset round the mole-head, so the nearer that ships lie to the mole they will ride the easier, with a gale from that quarter.

Wood and water may be obtained in any quantity at *present*. You get the water in the mole from pipes, laid down for that purpose, and wood may be purchased tolerably cheap.

Fresh beef, wines, and refreshments of all kinds, may be had in great plenty, and at a very reasonable rate.

Naples is commanded by Fort St. Elmo, which stands on the heights above the city. The mole and anchorage are commanded by the Castle Nuovo and the battery on the mole-head. Castle dell' Ovo is the outermost work, and is of considerable strength.

The trade is considerable, but mostly carried on by foreign vessels, as the Neapolitans have very few vessels of their own. A great quantity of fish is brought from Newfoundland by English ships.

To another British Officer we are indebted for the following.

"WITH the wind from the S.S.E. to S.W. a great swell sets into the bay. The best anchorage is with the point of Posilipo nearly in one with Castle Ovo, and the high lighthouse on the mole bearing N.W. or N.W. by N., in 10 or 11 fathoms, about half a mile from the mole-head; there you will have good holding ground; and, in case of necessity, be ready to run into the mole, the head of which has a low lighthouse on it, and with the above marks on, will bear about North, and Point Posilipo about S.W.

"Wood is to be had here, in small quantities, by purchasing; and plenty of very good water in the mole, where the casks are filled in the boat, with a leathern hose. In fine weather, boats may land in any part of the bay; but, in blowing weather, there is no good landing but in the mole. A great trade is carried on here, but chiefly in foreign bottoms; the king has several ships of war, which lie up in the mole, and are built at Castell' a Mare, on the S.E. side of the bay. Small vessels of war and galleys are built in the arsenal, which lies between Castle Ovo and the mole. No salutes pass here, but British officers are generally treated in the most friendly manner." [1817.]

FROM the MOLE of NAPLES to CAPE BRUNO, near the southern foot of Vesuvius, the bearing and distance are S.E. by S. [$S.E. \frac{1}{2} E.$] 8 miles. The coast between is low and smooth, and has several sandy beaches, towns, and villages. The first village is called *Cuvalerisa*, near to which a small river runs into the sea. Over this river, and not far from the sea, is a large stone bridge called *Ponta della Maddalena*, or Magdalen's Bridge: the next village, on the sea-side, is *S. Giovanni a Teduccio*: then two others, *Pietra Bianca*, and *Portici*. A point of rocks here stretches a little way into the sea, near to which is *Resina* tower, with a village near it of the same name: the next town is that called *Torre del Greco*, and between are several watch-towers along the coast, within which, at the distance of about 3 miles, is *Mount Vesuvius*.

CASTELL' a MARE, which lies at the distance of 13 miles S.E. by S. [$S.E. \frac{1}{2} E.$] from Naples lighthouse, and 5 miles from Cape Bruno, is a small town, situate at the foot of a high mountain on the sea-side; the land between it and Cape Bruno forms a deep bay, with a sandy beach, near the middle of which, on a small island, is *Fort Revigliano*. The town of Annunziata is at the bottom of this bay, to the northward; it has a watch-tower at each end: close to Fort Revigliano, to the westward, are 5 or 6 fathoms of water.

Before the town of Castell' a Mare is a little *mole*, in form of a hook, extending to the E.N.E., capable of containing a few barks; but, in fine weather, you may lie off the mole-head, in 5 fathoms of water, and fasten a hawser on shore, where there are anchors and rings. At the S.W. end of the town, near to a tower on the sea-side, is an excellent spring: this place is fit for galleys only to lie in, in the summer-season; but they

they should not remain here in the night, lest they be caught by sea-winds. Outside the mole, to the S.W., is a *convent*, upon a rocky point, near to which is a tunny-fishery.

Westward from the mole of Castell' a Mare, $1\frac{1}{2}$ mile, is *Cape d'Orlando*, and at a mile and a half farther S.S.W. is the village of Vico; the coast between is very high and steep, and has several rocks about it. About half a mile to the westward of Vico is a large point, *Punta d'Equa*, stretching out a little way into the sea, having a watch-tower on it, and several more near it; between this point and Vico you may anchor in 8 or 9 fathoms of water, on mud and weeds. From Point Equa to *Cape Sorrento* is about $2\frac{1}{2}$ miles W.S.W. $\frac{1}{4}$ W.: this cape has also a watch-tower on it; between, is a bay, of which the coast is steep and smooth at the top, but hollowed into subterraneous cells by the Romans; above, is the charming *Plain of Sorrento*, with several large houses and fine trees upon it. In the south part of this bay, about a mile from the cape, is the town of Sorrento, close to which, on the sea-side, are two small forts to defend the anchorage. You may anchor before the town, near the cape, in 7 or 8 fathoms of water, mud and weeds: off the cape are several rocks, both above and under water.

SORRENTO is situated on the side of a hill, rising from the sea-shore, between the mountains of Vico and Massa, by which it is sheltered. It was a municipal city of the Romans, and many ruins evince that it once was a city of consequence, adorned with several magnificent temples, among which were those of Juno and Diana, and more particularly one built by Pollius, in honour of Hercules. The situation of the town is delightful, being surrounded with gardens and hills. Here are fruit-trees of every kind, among which the orange and lemon are pre-eminent. The wines have been celebrated both by antients and moderns. The water which descends from the hills is collected in twenty-seven reservoirs, (a work of the antient Romans,) and is noted for its salubrity and sweetness. There are many baths in the vicinity. The greater part of the present inhabitants are goldsmiths, seamen, and fishermen. Many of the women are employed in breeding silkworms and weaving the silk.

From the *Cape of Sorrento* the *Capo di Massa* bears S.W. by W. $\frac{1}{4}$ W. [*S.W.*] one mile and a quarter; and from Cape Massa to *Capo di Corno* the bearing is S.W. $\frac{1}{4}$ S. [*S.S.W.*] nearly the same distance. Within the latter, to the east, is the village of *Massa*, about which are several rocks. On the shore is an antient temple, adorned with marble columns, and now converted into a church, dedicated to St. Peter. On the cape is a high watch-tower.

At three-quarters of a mile to the northward from Cape Corno, and at nearly the same distance westward from Cape Massa, is a high rock, called *Lo Verice*, having around it from 14 to 17 fathoms of water: another rock lies near the land of Corno, to the west. In the middle of the channel between the two rocks the depth is 30 fathoms.

From Cape Corno to the next projection southward is three-quarters of a mile. On this stands the tower of *S. Lorenzo*, to the E.S.E. of which is the village of *Marciano*. From the last the extreme point of *Campanella* bears S. by W. $\frac{1}{4}$ W. [*South*] two miles distant.

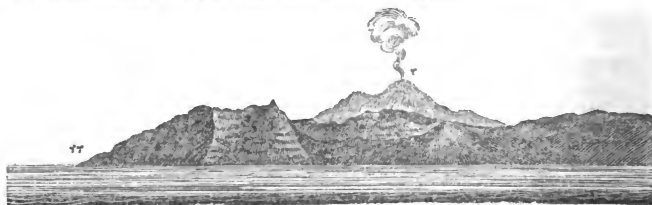
CAPRI.—The east point of this island lies $\frac{1}{4}$ W. N.W. $\frac{3}{4}$ W. [nearly *West*] 3 miles from the extremity of Cape Campanella. From this point the greatest length of the island is $3\frac{1}{2}$ miles to the W.S.W. Its eastern and western ends are both very high, but these are connected by a neck of lower land. The western half is a vast mass of rock, of great height, and inaccessible from the sea. The eastern end also rises in elevated precipices, but between the two is a valley covered with fig-trees, almonds, oranges, olives, myrtles, and vines, presenting a singular and highly-interesting contrast with the rocky precipices on each side. Capri has several springs of good water, and about fifteen hundred inhabitants, who occupy the town in the valley and several villages. The climate here is like a perpetual spring. Vast flocks of quails alight annually, in the month of March, of which great quantities are taken in nets, and sent to Naples.

On the N.E. side of the island is a bay, with a sandy beach, on which are several fishermen's houses. Above this beach, between the rising grounds on each side, is the small town of Capri, already noticed, near to which is an antient castle: upon the top of the eastern point is an antique building, said to be the sepulchre of Tiberius Cæsar. In cases of necessity you may anchor before the bay, with South and S.W. winds, within a small cannon-shot of the landing-place, in 4 or 5 fathoms, on mud and weeds; but, at a little distance further off, the depths are from 15 to 25 fathoms. Close to the island

are some rocks, both above and under water; but you may sail all round, at a short distance, without danger.

There is a good channel between Capri and Cape Campanella, having 14 to 15 fathoms near the island, 15 to 20 near the cape, and, in the mid-channel, from 60 to 80 fathoms: but, unfortunately, a sunken rock lies about half-way between the island and the cape, with 35 fathoms close to it. This rock may easily be avoided, in sailing through the channel, by keeping over either to the island or the main.

GULF or BAY of SALERNO.—The high land of the Promontory of Minerva, which terminates in the point of Campanella, extends far to the eastward, and has under it, upon the southern shore, the towns of *Amalfi*, *Atrani*, *Minuri*, *Majuri*, and *Vietri*, besides a number of villages. The western part of this land, with Vesuvius N.N.E. by compass, appears as shown in the annexed figure.



Vesuvius, N.N.E.

Point Campanella, N. by E. $\frac{3}{4}$ E.

From Point Campanella the *Punta di Montalto* bears nearly true East, three-quarters of a mile; the land between forms a cove called *Cala della Creta*, the coast of which is steep-to, and the water deep. At the distance of $3\frac{1}{2}$ miles to the eastward of the latter are three rocky islets, called *Li Galli*, which were the *Syrenusæ* of the antients, or supposed abode of the *Syrens*, those fabulous beings, daughters of Oceanus and Amphitrite, who were said, by their music or singing, to decoy mariners to destruction.

The first town of consideration to the eastward of these islets is AMALFI, at the distance of 3 leagues. This place was once celebrated for its trade with the Levant, which afterwards centred at Venice, and has also been noted as the place where the mariner's compass was perfected* by *Flavio de Giova*, in 1302; it has no port, and its road is open to the South and S.E.; but vessels may lie sheltered from the winds from N.W. to N.E. under the high land.

Between Amalfi and VIETRI, which lies between two and three leagues more to the eastward, are the other towns already noticed. Vietri has lately been described by Mr. Eustace as a large and flourishing town, straggling down to the sea-shore, and having a convenient little port. Near the Marina exist several vestiges of antient buildings. In an excavation made in 1675, a beautiful pavement was found, long streets were uncovered, and several marble urns dug up; and, in more recent excavations, the remains of antient aqueducts, pieces of columns, and ruined edifices, have been discovered. According to Romanelli and others, this was the site of the antient city of *Marcina*.

SALERNO [ant. *Salernum*] lies at the distance of only one mile to the eastward of Vietri. It appears white, is populous, stretched along the beach, and backed by a ruined castle on the hill above. The country around is fertile and pleasant, presenting a range of hills, covered with olive-groves, orchards, and corn-fields.

The Roads before Vietri and Salerno are good, and both lie in a bay sheltered by high land on the west, and over which there are regular soundings to the shore on each side. Salerno has a small mole, within which the depth is only 6 feet, but half a mile without it are 10 fathoms. The chart is sufficient to show that this place is entirely exposed to all winds between S.E. by the South to S.W.

* Some say *invented*, but this is wrong. The Chinese are supposed to have been acquainted with the magnetic needle more than a thousand years before CHRIST. Marco Paulo is said to have brought the invention from China to Italy in 1260, but it seems to have been known in Europe nearly a century before.

From Salerno the coast, to the south-eastward, declines to a smooth sandy beach, which thus continues to the distance of 7 leagues. Above this beach, at the distance of $6\frac{1}{2}$ leagues from Salerno, are the remains of *Paestum*, now *Pesto*, famous for its roses in spring and autumn. The antient walls are still standing, nearly entire, and rather more than two miles in circumference; there are also the remains of several beautiful temples and public buildings.

AGROPOLI, a small town at the mouth of a little river of the same name, lies 4 miles to the southward of Pesto, at the base of high lands, by which it is surrounded on the south and east. From Agropoli to the *Point* or *Cape Licosa*, the distance to the S.W. is 8 miles: the shore between is clifty, with deep water very near it, and the interior land, *Monte Tresino*, &c. is very high. There are towers on the projecting points, and on the south end of *Monte Tresino* is a conspicuous village, *C. del Abbate*.

CAPE LICOSA.—Cape Licosa is the southern extremity of the Gulf or Bay of Salerno, and the western extremity of a range of high hills extending thence to the south-eastward. The point has a tower on it, and a rocky shoal stretches from it a quarter of a mile to the westward: upon this shoal is an islet, the *Isola Piana*.

At the distance of half a league from the cape, on the west, is a sand-bank, three miles long from north to south, and half a mile in breadth. On its north end are 5 and 6 fathoms, on the south end 10 and 12 fathoms, and on the intermediate parts the soundings vary from 6 to 11. Without this bank, in an extent of 4 miles to the west, are four others, but on all these there is a greater depth of water, and not less on the inner one, which is the shoalest, than 12 fathoms. Between the cape and the inner shoal, the fair channel is a mile in breadth, with no less than 17 fathoms.

The direct bearing and distance from Cape Licosa to the east end of the Isle Capri, at the entrance of the Bay of Naples, are N.W. $\frac{1}{2}$ N. [*N.W. by W.*] 34 miles.

FROM CAPE LICOSA to the E.S.E. the coast is high, irregular, and destitute of harbours, with rocks, here and there, stretching from the projecting points, and no safe anchorage. The first roadstead worthy of notice is PORT PALINURO, which is 8 leagues S.E. $\frac{1}{2}$ S. [*S.E. by E.*] from the cape; it has a fort, off which you may anchor, in 7 or 8 fathoms of water, sheltered by a projecting point from the south and east, but quite exposed to the S.W., West, and N.W.

FROM PORT PALINURO, the coast trends to the E.S.E. and E.N.E., 16 miles, to the town of POLICASTRO, which is situate in the bottom of the bay or gulf of that name. This was the antient *Buxentum*: it is now a place of little importance. You may anchor before the town in 12 or 15 fathoms, but quite exposed to southerly winds.

FROM POLICASTRO, the coast trends to the E.S.E., S.E., S.S.E., and South, 9 leagues, to the village of Cirella. It is variegated and adorned with six or seven villages, of which that named *Sapri* is $4\frac{1}{2}$ miles from Policastro, at the bottom of a cove, in which there is good anchorage, but open to the South and S.W. A little island, named *Dino*, lies 10 miles to the northward of Cirella, and on the N.E. of this, also, is anchorage for small vessels. Occasional shelter may, also, be found in the little harbour of *Casalletto*, which is a mile to the southward of *Dino*.

At half a mile to the southward of Cirella is an islet of the same name, with a watch-tower on it. On the N.E. of the islet a small vessel may anchor in case of necessity.

FROM CIRELLA POINT the coast trends South and S. by E., $16\frac{1}{2}$ leagues, to CAPE SUVERO. It still continues variegated, and has deep water in general, at a mile from shore. There are several towns and villages along shore, but no haven or port for vessels of any description; you may, however, anchor any where with an off-shore wind.

GULF or BAY of St. EUPHEMIA.—The Bay of this name is that formed by the land between CAPE SUVERO and CAPE VATICANO. The bearing and distance between these capes is S.W. by W. [*S.W. $\frac{1}{2}$ S.*], 8 leagues. The town of St. Euphemia, from which the bay takes its name, is 2 miles from the sea, at the distance of 4 miles true East from the tower on Cape Suvero. There are some anchoring-places in the bay, but no haven or place of safety. The best situation seems to be to the westward of the village of *Pizzo*, on the south side, within a sand-bank, which serves to break off the sea, and a sandy beach. The town of *Tropea*, which is 5 miles to the E.N.E. of Cape Vaticano, is built on a rock near the sea: it contains five parish-churches, and is conspicuous. This, as well as other towns on this coast, has suffered greatly from earthquakes, particularly from that of 1783.

The

The whole of the coast between Tropea and Cape Vaticano is rocky and foul; there are several rocks above water, and particularly the *Scoglio Mantineo*, which lies at two-tenths of a mile off from the cape, leaving between a passage which may be used by small vessels. A similar islet is the *Scoglio Vudero*, a mile more to the northward, and at one-third of a mile from the nearest shore.

GIOJA BAY (GOLFO DI GIOJA.)—From Cape Vaticano, the land to the S.E. is very high, as far as the town of *Nicotera*, which is 7 miles distant, and sheltered to the northward by *Monte Poro*. The shore thence, 8 miles to the southward, is a sandy beach, on the southern part of which may be seen the village and tower of *Gioja*, in lat. $38^{\circ} 24\frac{1}{2}'$. The coast again increases in height, with a cliffy shore, and thus it continues nearly 8 miles more, to the village of *Bagnara*, on the west of which is a beach of one mile. Cliffs succeed thence to the town and castle of *Scilla*, at a league and a half to the westward of *Bagnara*.

SCILLA, the antient *Scylla*, is situated partly on the sea-shore, but the greater part above, among the rocks; the streets are narrow, and nine different rows of houses are seen standing immediately one above the other. Over the highest of these straight rows, in rather in an oblique direction, are several others. A water-fall, which rushes from the rocks, is supposed to be the *Cratais* of Homer. *Scilla* was dreadfully injured by the memorable earthquake of 1783, when a part of its promontory was thrown into the sea. The dangers arising from an approach to this place have been proverbial, but the only real danger is when the current and wind are so opposed as to impel a vessel towards the rocks.

In his valuable and accurate Memoir on Sicily and its Islands, by Capt. W. H. Smyth,* this gentleman says of *Scylla*:—"Moderns of intelligence, in visiting this spot, have gratified their imaginations, already heated by such descriptions as that of the escape of the Argonauts and of the disasters of Ulysses, with fancying it the scourge of seamen; and that, in a gale, its caverns '*roar like dogs*:' but I, as a sailor, never perceived any difference between the effect of the surges here and on any other coast; yet I have frequently watched it closely in bad weather. It is now, as I presume it ever was, a common rock, of bold approach, a little worn at its base, and surmounted by a castle, with a sandy bay on each side. The one on the south side is memorable from the disaster that happened there during the dreadful earthquake of 1783, when an overwhelming wave, (supposed to have been occasioned by the fall of part of a promontory into the sea,) rushed up the beach, and, in its retreat, bore away with it upwards of 2,000 people, whose cries, if they uttered any in the suddenness of their awful fate, were not heard by the agonized spectators around. The town is built partly on the hill, and stretches down to the sea-shore on each side. A tolerable road leads up, though the steepness of the ascent, in several places, renders many windings necessary: the neighbourhood is exceedingly romantic, and there are many public buildings, but they often suffer so severely by lightning, especially the castle, that fatal accidents are frequent."

From *Scilla*, the *Faro Point* of Sicily bears N.W. by W. $\frac{1}{2}$ W. [*W. by N.*], $2\frac{3}{4}$ miles.

FROM *SCILLA* to *Punta del Pezzo* the coast rounds westward [*W.S.W.*], $4\frac{1}{2}$ miles; and, thence to *Cape Pellaro*, it trends 13 miles irregularly to the southward, thus forming two slender bays, and the eastern side of the *FARO* or *STRAIT* of *MESSINA*. The only place of importance on this coast is *REGGIO*, the antient *Rhegium*, which stands within a projecting point, at the distance of 5 miles to the northward of *Cape Pellaro*; and here is anchorage, at a short distance from shore, but the edge of the bank is steep, and all caution is required. There is also anchorage in the bay, at $2\frac{1}{2}$ miles more to the northward. The shore, in the greatest part of the distance above-mentioned, is low and beachy, although the interior land is high. In the bay formed by the line of coast, at half a league to the north-eastward of *Cape Pellaro*, you may anchor, near the shore, in from 15 to 20 fathoms: and, at half a mile more to the northward, in from 10 to 12 fathoms.

REGGIO has been noted for manufactures of stockings, gloves, waistcoats of thread

* "MEMOIR descriptive of the Resources, Inhabitants, and Hydrography, of Sicily and its Islands; interspersed with antiquarian and other notices. By Captain William Henry Smyth, R.N., K.S.F., Fellow of the Astronomical and Antiquarian Societies of London. Dedicated, by permission, to the Lords Commissioners of the Admiralty, and intended to accompany the Atlas of Sicily, published at their office." London, quarto, 1824.

and silk, &c. The environs abound in oranges, citrons, mulberries, and grapes, with some sugar-canes.

The *Cape and Tower dell' Armi* are $4\frac{1}{2}$ miles S. by E. $\frac{1}{2}$ E. [*S.S.E. $\frac{3}{4}$ E.*] from Cape Pellarò. At a mile and a half to the southward of the latter is the tower and telegraph of Pellarò, on elevated land. At 6 leagues eastward from Cape dell' Armi is *Cape Spartivento*, the S.E. point of Calabria, with its tower: on the coast between are several towers, but nothing else remarkable, and the coast is entirely exposed to the sea.

THE FATA MORGANA.—We shall conclude this Section with a note on a remarkable aerial phenomenon, which has been seen on the Strait of Messina, at a certain height in the atmosphere. The name, which signifies the *Fairy Morgana*, is derived from an opinion of the Sicilians, that the spectacle is produced by fairies.

This singular meteor has been described by various authors; but the first who mentioned it, with any degree of precision, was Father Angelucci, whose account is thus quoted by Mr. Swinburne, in his *Tour through Sicily*:—"On the 15th of August, 1643, as I stood at my window, I was surprised with a most wonderful delectable vision. The sea that washes the Sicilian shore swelled up and became, for 10 miles in length, like a chain of dark mountains; while the waters near our Calabrian coast grew quite smooth, and in an instant appeared as one clear polished mirror, reclining against the ridge. On this glass was depicted, in *chiaro-scuro*, a string of several thousands of pilasters, all equal in altitude, distance, and degree of light and shade. In a moment they lost half their height, and bent into arcades, like Roman aqueducts. A long cornice was next formed on the top, and above it rose castles innumerable, all perfectly alike. These soon split into towers, which were shortly after lost in colonnades, then windows, and at last ended in pines, cypresses, and other trees, even and similar. This is the *Fata Morgana*, which, for twenty-six years, I had thought a mere fable!!

To produce this deception, many circumstances must concur, which are not known to exist in any other situation. The spectator must stand with his back to the East, in some elevated place behind the city, that he may command a view of the whole bay; beyond which, the mountains of Messina (in Sicily) rise and darken the back-ground of the picture. The winds must be hushed, the surface smooth, the tide at its height, and the waters pressed up by currents to a great elevation in the midst of the channel. All these events coinciding, so soon as the sun surmounts the eastern hills behind Reggio, (in Calabria,) and rises high enough to form an angle of 45 degrees on the water before the city; every object existing, or moving at Reggio, will be repeated upon this marine looking-glass: each image will pass rapidly off in succession as the day advances, and the stream carries down the wave on which it appeared. Thus the parts of this moving picture will vanish in the twinkling of an eye. Sometimes the air is so impregnated with vapours, and undisturbed by winds, as to reflect objects in a kind of aerial screen, rising about 30 feet above the level of the sea. In cloudy heavy weather, they are drawn on the surface of the water, bordered with fine prismatic colours.*

Captain Smyth, in his '*Memoir*,' says, upon this subject, "One of the most extraordinary phenomena of this celebrated region is an aerial illusion, called the *Fata Morgana*, from being supposed so to be a spectacle under the influence of the queen of the fairies, the '*Morgain la Fay*' of popular legends. It occurs during calms, when the weather is warm, and the tides are at the highest; and is said, by some refractive property, to present in the air multiplied images of objects, existing on the coasts, with wonderful precision and magnificence. The most perfect are reported to have been seen from the vicinity of Reggio, about sun-rise. I much doubt, however, the accuracy of the descriptions I have heard and read, as I cannot help thinking that the imagination strongly assists these dioptric appearances, having never met with a Sicilian who had actually seen any thing more than the loom, or *mirage*, consequent on a peculiar state of the atmosphere; but which, I must say, I have here observed, many times, to be unusually strong. It is spoken of, by some, as a luminous ignescent phenomenon, infallibly predictive of an approaching storm."

The Currents, &c. in the Faro or Strait of Messina will be noticed hereafter.

* In a small work lately published, entitled *The Conchologist's Companion*, we have seen a description of the *Fata Morgana*, which is given as if seen by the compiler of that work. It is, however, so exactly similar to the above, by Father Angelucci, that we hope to be pardoned for suspecting it to be identically the same.

IX.—The ÆOLIAN ISLES, SICILY, MALTA, GOZO, and OTHER ISLANDS in the SICILIAN SEA.

1.—THE ÆOLIAN OR LIPARI ISLES.

THESE islands, forming a considerable group off the north coast of Sicily, are the *Æolia*, or *Æolides*, of the antients, and were so named from being the supposed residence of *Æolus*; who there, according to the fable, retained the winds imprisoned in caverns, and released them at his pleasure. They were also called *Insulæ Vulcaniæ*, because they had volcanoes, and were known as the *Ephæstiades* of the Greeks. Here ‘Vulcan forged the bolts of Jove,’ and here originated many other mythological fancies, now no more. The islands are exceedingly irregular, and the sea about them is frequently agitated by sudden tempests. The island Lipari is the seat of government of all the islands.

In his *Memoir* on Sicily and the Sicilian Islands, already noticed, Capt. Smyth says, “All these islands exhibit the corrosive effects of gases and spray; but the western coast, rising abruptly in precipitous masses, and shelving down gradually to the eastward, is an interesting geological feature, in which it agrees with the greater part of the West-India Islands, and many others. It is remarkable, that, besides the western coasts of all the Lipari Islands being steep and craggy, they each, with scarcely an exception, have a high isolated rock off their northern shores, a singularity extending even to Ustica. The basis of the whole of this group is horn-stone, with the various alterations and decompositions occasioned by volcanic influence;—an influence easily traced there, in all its grandest and wildest varieties.

“The climate is highly salubrious, and the weather generally soft and refreshing; but, though there are a few trifling springs, there is a general scarcity of water, as the soil, consisting entirely of scorice, tufa, pumice, pozzolana, and ashes, without any intervening stony stratum, except occasional masses of obdurate vitrification, rapidly absorbs the moisture; the natives are, consequently, obliged to construct capacious cisterns, wherein rain-water is kept in a cool temperature.

“Cattle are scarce and lean, because the pasturage is fit for goats only; but the lands are well cultivated, and yield grapes, currants, figs, prickly pears, corn, cotton, olives, and pulse; the latter grown under the cane-trellises that support the vines. Rain, if violent, occasions great damage to the grounds, from the situation and friability of the soil; and swarms of locusts sometimes also injure the produce severely. A very considerable quantity of wine and currants is exported, and an active trade carried on in bitumen, pumice, nitre, pozzolana, cinnabar, coral, and fish; but alum, once a great staple, scarcely exists as an article of commerce; a failure supposed to be owing to the decreased heat of the subterranean fires. Sulphur is still exported; but not in the quantity it might be, in consequence of a prejudice existing that the vapour, arising from the purifying of it, infects the air and injures vegetation.

“The native islanders are contented, temperate, and hardy, and are esteemed excellent sailors: but, on the other hand, they are considered as inquisitive, mean, and immoral. They are generally poor, but few of them are in the extreme of poverty; and, from leading an active life, they are a very healthy race, though, from dirty habits, the itch is very prevalent through all ranks: among other qualities, they are accounted expert throwers of stones, a valuable talent in an unarmed population, exposed to predatory visits from corsairs.”

USTICA.—This island, the antient *Ostcodes*, is remotely situated to the westward of the general group, in latitude $38^{\circ} 42'$, and longitude $13^{\circ} 10'$, and at the distance of 35 miles, *N. by W. true*, from Palermo, the capital of Sicily. It is entirely composed of volcanic substances, but extremely fertile. Some banks in the vicinity afford fish, and a quantity of excellent high-coloured coral. The inhabitants amount to 1700, exclusive of the garrison and prisoners. A weekly packet sails hence to Palermo; from which place and Cefalu, on the north coast of Sicily, charcoal and fire-wood, consisting chiefly of olive-roots, are imported.

On several parts of the coast are spacious grottoes, with deep water in them, of which one, on the eastern side, has a singular stalagmitic incrustation of shells, intermixed with lava; and another near it, with a very low entrance, is so roomy within as to form a retreat for the fishermen, on the approach of Barbary cruisers. Off the western side, at about half a mile westward from the steep cliffy cove of the *Passo di Madonna*, is a large and singular rock of lava, called the *Medico*, having deep water around it. The greatest extent of the isle is two miles and three-quarters from N.E. to S.W.

The only village is that of *Santa Maria*, upon a little cove formed by the N.E. coast, but sufficiently large for the trading feluccas which resort to it, and is safe in all winds but the *Scirocco*, hereafter noticed. The town is large in proportion to the population, and has clean regular streets, a church, hospital, school, &c. The cove is only one-tenth of a mile wide, and of the same depth, with 5 fathoms in the middle, and it lies between a hill, named *Falconara*, on the N.E., which has a fort and prison on its summit, and a high bluff on the S.W., distinguished by a stout square tower, which cannot be mistaken. There is also a tower, the *Spalmadora*, which commands a landing-place, on the S.W. side of the island.

Ustica, from a distance, eastward and westward, has the appearance of two small islands, and it may be approached without apprehension, only taking care to avoid *Walker's Rocks*, a small reef of 9 feet, which lie at the distance of one mile N.E. by N. [*N. by E. $\frac{1}{2}$ E.*] from the central north point of the island, with from 12 to 7 fathoms around them.

In the vicinity of the island, distant from one and three-quarters to one mile, are three banks with deep water. Of these the *Apollo*, with from 15 to 25 fathoms, lies West [*W. S. W. $\frac{1}{2}$ W.*] from the S.W. or Spalmadora Point; the *Diana*, with 11 to 20 fathoms, S.S.E. $\frac{1}{2}$ E. [*S.E. $\frac{1}{2}$ S.*] from Point Cavazzi, or the south point; and the *Juno*, with 55 to 80 fathoms, nearly E. by S. [*E. $\frac{1}{2}$ N.*] from the cove of Santa Maria; bottom of coral, &c. Variation $18^{\circ} 57'$ W.

Ustica serves as an excellent mark for ships bound to Palermo and the northern ports of Sicily.

ALICUDI.—This island, which is rather larger than Ustica, bears from the latter S.E. by E. $\frac{1}{2}$ E. [*E. by S.*], 50 miles. It was the antient *Ericusa*, is remarkable for its salubrity, and rises abruptly from the sea a conic crater, with irregular ravines and precipitous hills. "Although," says Captain Smyth, "its fires have been extinct for many ages, lava is seen in wild grotesque streams, extending from the summit down to the sea, so harsh and durable as still to retain the sterile forbidding appearance of a recent eruption.

"Notwithstanding this discouraging aspect of desolated nature, Alicudi is cultivated with singular and laborious industry, in every place capable of vegetation; and particularly between all the interstices of the shattered masses, where, by constant exertion, barilla, flax, capers, and pulse, are produced; and wheat so peculiarly fine, that it makes, without exception, the best bread I have ever met with."

The population consists of about 260 sturdy peasants, so healthy that diseases are almost unknown amongst them; abstinence is their sovereign remedy for illness, and oil their chief nostrum in cases of accident. The church, which is on the S.E. side, is situated so high up, and the land beneath it so steep, that a view from it is like looking from the mast-head of a ship. The coasts are rude craggy precipices; among them are two small and insecure landing-places, of which the one to the S.E., under a point named Palomba, is the best, and here the fishermen draw their boats up on a patch of sand. Both are very difficult of access in fresh winds.

FELICUDI.—At the distance of two leagues and a half E. $\frac{1}{2}$ S. [*E. by N.*] from Alicudi is FELICUDI, the antient *Phanicausa*, an extinct volcano, with three high mountains.

This island is of very irregular shape, nine miles in circumference, fertile, and well cultivated. It produces wheat, barley grapes, olives, pulse, and flax. The population, about 800, under the superintendence of a curate only, are hardy, industrious, healthy, and peaceable. They reside in mean flat-roofed buildings, on the sides of the hills. Rain-water is preserved in cisterns: there being no other fresh water on the island, with the exception of a little spring, or rather filtering of rain, on the summit of *Mont-Agnuolo*,

Agnuolo, nearly 2000 feet above the level of the sea. The church, a small building, with a house on each side of it, is about half-way up the hill, toward the S.E., and close to an immense dell, called *Fossa delli Felci*, or *Fern Ravine*, which is supposed, by the islanders, to have been the principal crater.

The S.E. end of the island is a little peninsula, of moderate height, and a conical shape, connected to the main body of the island by a low and fertile isthmus, forming a cove on each side, the anchorages in which are very insecure. Of these coves the northern one is called *Conca di Lao*, and the southern *Cala di Speranza*: from the first is a steep and intricate path, leading to the church and principal houses: at about one-third of the way up is a rude battery of one gun, the only artificial defence against pirates.

The coasts are rugged and broken, and exhibit grand masses of basaltiform lava. On the western shore, between two points of land, is a curious and astonishing grotto, which may well be imagined to have given the idea of the caves of Æolus. Into this place Captain Smyth rowed, through a perforation of upwards of 60 feet wide, and 30 high, forming the entrance to a natural colonnade, widening gradually into an extensive hall with spacious arches. This magnificent cavern is about 160 feet long, 120 broad, and 50 high, and forms a cool retreat, in which several seals were seen.

To the N.W. $\frac{1}{2}$ W. [*W.N.W.*] half a league from the mouth of the cavern just described, a slender rock, called the *Canna*, or *Cane*, rises from the sea to the height of 280 feet. From its strong resemblance to a ship before the wind, it has frequently been mistaken for one, and at a little distance. Besides this, there are several other rocks, steep-to, on the western coast, and off *Point Ficcarazzi*; on the north coast, the highest shore of the island, is a steep black mass of compact prismatic lava, called the *Fila di Sacca*, with deep water close to it, and a passage for small craft between.

The ISLAND SALINA, about 14 miles in circuit, lies true *East*, 10 miles from Felicudi. This was once the *Didymé*, or *Twins*, and afterwards the *Thermisia* of the antients. The first name seems to have been acquired from two high conic mountains that distinguish the island to the north and south, and the second from the warm springs or baths, which it still possesses. The origin of the island seems to have been altogether volcanic, and vestiges of its craters may still be seen, but the fires must have ceased before the dawn of history, and they have now become the most pleasing and fertile spots in the whole group of islands.

The population of Salina amounts to about 4000; the men hardy and laborious, but filthy and ferocious; the women, equally dirty, are coarse and masculine. Some kind and hospitable people may, however, be found among them. Both sexes are, more or less, generally infected with the itch.

Between the high mountains to the north and south is a valley extending each way to the sea. This, Captain Smyth says, is so rich and productive as to merit its name of *Fossa Felice* [Happy Valley]; and here the various trees bear with such exuberant luxuriance, that the natives say, the Earth is proud of its vigour. In consequence of this fertility, an excellent revenue is derived from the exportation of grain, fruit, pulse, capers, salt, alum, soda, and wines, of which last the fine *Malvasia* is unrivalled for its grateful qualities.

There are three anchorages, all open to the sea, and to which small vessels resort for produce. Each is distinguished by a church or chapel, surrounded by low flat houses, irregularly scattered. Of these, *Santa Marina* is near the middle of the East coast, on the border of the valley, and may readily be known by its church on the strand, with a large bell suspended to a tree, growing before the door: near it is a pure spring, constantly running, and fresh water may be had by digging any where on the beach.

The south-east end of Salina is *Punta Lingua*, a long low shingly point, having a chapel, at nearly a mile from its southern extremity, and a lunette battery near the latter. An extensive lake, with salines, lie in the interior of Point Lingua. To the southward of the point, the water shoals to nearly a quarter of a mile out, but beyond the depth of 8 fathoms the strait is clear thence to Lipari.

On the S.W. coast are the rugged rocks of *Punta Spina*, which seem to have fallen perpendicularly from the very summit of the mountain, a height of nearly 2000 feet. Near the middle of the west coast is one of the anchorages already noticed, and the village of *Arenal* or *Arragal*, with its chapel and magazine.

The

The N.W. coast is singular and abrupt, with stupendous overhanging cliffs. Off this coast is the *Pyramid*, an insulated rock, presenting a lofty red cliff. The hills hereabout abound with game, and form an amphitheatre, inclosing a fertile cultivated valley.

Between a remarkable perforated point, which is the north point of the island, and *Punta Apullara*, its N.E. point, lies the quarter of *Amalfi*, a populous district, of which the heights are well wooded. This is the third of the three anchorages. The houses are scattered about the church, and a few within Point Apullara mark the landing place. On the point is a chapel and some houses, and, at the landing-place, some magazines excavated in the rock.

On the north coast of Salina there is excellent fishing, and the *Pinna Marina*, a gigantic kind of muscle, termed by the antients the *silk-worm of the sea*, is found in great abundance about the island, with its curious attendant crab. The *Paper Nautilus* is also found here, and generally during the time that hawk's-bill turtle are taken.

PENROSE ROCKS.—Nearly in a line, and in mid-channel, between the north points of Salina and Panaria is a shoal of $4\frac{1}{2}$ fathoms, supposed to be the head of a column of lava; it is covered with marine plants, and much resorted to by fish. The depths around it abruptly increase to 14, 27, and 30 fathoms. It bears from the north point of Salina nearly E. $\frac{1}{2}$ S. [*E. by N.*] $5\frac{1}{2}$ miles, and lies with the church of Amalfi immediately under the N.W. peak of Salina, and the western part of Cape Castagna, the N.E. point of Lipari, on with *Monte Rosso*, on the west side of the same island.

LIPARI, the chief island of the Æolian group, is separated from Salina by a channel less than 4 miles in breadth. It was once called *Meligunis*, is about 18 miles in circumference, and now contains about 12,000 persons.

This island is noticed in very early history, and many curious vestiges of antient prosperity remain upon it. The town, *Lipari*, is situated on the S.E. coast, and is defended by a castle, opposite to which, and near the shore, there is anchorage, but exposed to every wind, excepting that which blows over the island. This place is healthy, though crowded, irregular, and dirty, with narrow streets and ruinous public edifices. The castle, which incloses the cathedral and some other edifices, stands on the summit of a mass of volcanic glass. A college is established here, to which belong eight schools, in different parts of the islands.

The BAY of LIPARI is formed on the north by *Monte Rosso*, an immense mass of cleft volcanic matter, of a reddish colour; and, on the south, by *Capo Capistello*, a rugged rock of lava. The distance between these is two miles.

The promontory on which the castle stands divides the bay into two parts. The water at a short distance out is very deep, but there is a spot, about a quarter of a mile to the northward of the castle and off the beach, where a reef of lava stretches out, with 3 fathoms on its head and 6 in its swash; sixteen or seventeen vessels may lie safely between this shoal and the castle, with anchors in 12 or 14 fathoms, and stern-fasts on the shore. Large ships may take anchorage more to the north, under the *Scala di Caneto*, or *St. Giacomo*, where, though the bottom is good, the S.E. wind is inconvenient.

The craft of the island moor to the south of the castle, off the Pratique Office mole, and many fishing boats in a cove a little more to the south.

The grand features of the island are two mountains; that of *S. Angelo*, toward the centre, and *Guardia* in the south. The first is nearly 1000 feet in height. The interior of the country is singularly rugged, broken, and diversified with hills of volcanic glass, porphyritic lava, pumice, and other vitrifications, many of which must be more than 3000 years old, and yet exhibit no symptom of decomposition. Between the hills are ravines, apparently worn through by the action of heavy rains, and along these the roads lead, often only from 5 to 10 feet wide, between cliffs of a frightful height and aspect. There are also two large plains, well cultivated, and producing fine fruit, cotton, pulse, olives, and other vegetables, besides a three months' supply of corn for the island. The malmsay wine from these plains, of delicious flavour, is well known.

Although Lipari has not suffered from volcanic eruptions for many ages, its subterranean fires are not extinguished; for, on digging in the central parts to a trifling depth, heat, smoke, and a sulphureous scent immediately issue, while hot steams are found in various places. It is literally, says Captain Smyth, the wreck of a vast conflagration;

and, on the whole, offers the finest field in the world to a lithologist, as every footstep leads to specimens of the most curious productions.*

CANETO, &c.—To the northward of the Bay of Lipari, on the east side of the island, and divided only by the promontory of Monte Rosso, is the *Cala* or *Cove* of *Caneto*, at the bottom of which is the village of that name, prettily situated under the white cliffs of a prodigious mountain of pumice, called *Campo Bianco*. At the northern base of this mountain rises Cape Castagna, the north-eastern promontory of the island.

NORTH COAST.—On the northern coast, to the west of the mountain of Castagna, is the cove and village of *Aqua-calda*, where a vessel may be sheltered from southerly winds, but exposed to nearly all others. On the summit of Monte Corvo, at a mile W.S.W. *true*, from *Aqua-calda* is the town of *Quattro-pani*, with a church, school, &c.

From *Legna-nera*, or *Corvo Point*, to the N.W. end of the island, a distance of two miles, the coast is a steep cliff, which continues thence to the southward. Off this cliff, at three-quarters of a mile to the E.N.E. of the N.W. point, is a high bold rock, called the *Torricella* or *Turret*. At the same distance, to the S.W. of that point, are two insulated pyramids, off the cliffs of *Permeta*, which are distinguished by a tower, constructed of the finest lithologic specimens in the island, and near which is the grotto called the *Devil's Cave*, with other natural curiosities.

WEST AND SOUTH COASTS.—Nearly half-way down the west coast, at nearly three-quarters of a mile from the nearest shore, is the *Scoglio del Bagno*, or the *Bath Rock*, a high and steep mass of lava. True West from this, nearly two miles, is the *Bentinck Reef*, a very dangerous ledge, 200 yards in circuit, and with $2\frac{1}{2}$ fathoms on it, and having a sunken wreck near it, in 17 fathoms. The bank around it has on it from 9 to 35 fathoms, extends more than a mile to the west, and is a good fishery. The hot baths of St. Calogero are on the land to the eastward of the Bath Rock, and their waters flow thence, through a ravine, to the sea.

Near the S.W. headland of Lipari are some insulated rocks called the *Quails*; and, at a mile to the S.S.E. of these, are two others more remarkable. Of the latter, the eastern one, *Pietra Longa*, is a heap of volcanic laminæ, in a highly vitrified state, 150 feet high, with an aperture at its base, through which boats may row; and, at a little distance, it appears so like a ship under sail, as to be very frequently mistaken for one: the other, *La Rocca de Corvacci*, is much lower, and abounds with a kind of large gull, prized by the natives.

Point Chiapparo is the south point of Lipari; to the N.W. of this, one mile, and eastward of *Pietra Longa*, is the *Praya del Vinco*, a small bay, having a perfectly safe channel, which affords occasional anchorage during a northerly gale, although at times there is a disagreeable ripple, occasioned by current.

VULCANO.—The Island **VULCANO** (ant. *Hiera* or *Sacra*) lies directly to the southward of Lipari, the narrowest part of the strait between being only one mile in breadth, though of great depth. This island is of very irregular shape, particularly toward the N.E., where it forms the peninsula called *Vulcanello*, or the *Little Vulcan*, and is about 15 miles in circuit.

VULCANO is very high, and wonderfully variegated by the convulsions of nature; it contains a rich variety of pumices, and salts, and sulphur, in all its different states, with lavas and vitrifications. The interior is mostly a sterile valley of powdered cinders, and much too warm for cultivation. A great part of the shore, on the south-east, presents a precipitous mass of lava, scoriæ, pumice, and ashes, of the most sterile and forbidding aspect.

In the central part, toward the south, is *Monte dell' Aria*, the highest mountain in the island; and, at two miles to the northward of this is the *Great Crater*, of which Captain Smyth has given a glowing and beautiful description. A deep valley detaches this crater from the neighbouring hills. On gaining its edge "a more superb and pleasing spectacle presents itself within than is afforded either by *Ætna* or *Vesuvius*, from the magnitude of its dimensions, and the magnificence of the brilliant colours that every where strike the eye." From the bottom of it was a frequent explosion of gases, and a continued roar, similar to that of a cataract, or rather of many anchor-smith's forges, appa-

* Enumerated in the '*Memoir*,' page 266.

rently arising from some vast abyss of central fires. By night a pale lambent flame may be seen to issue from many of the fissures.

Vulcanello stands to the N.E. of the Great Crater, and is connected to the main part of the island by a rock formed of its own lava. It is so constituted as to form the two ports or harbours of the island; *Porto Levante*, facing the east, and *Porto Ponente*, facing the north and the island Lipari. This portion of land emerged from the sea about 180 B. C.; it has now two craters, neither of them large; one is extinct and fast filling up; but, from the other a rumbling noise is heard, and it frequently emits smoke.

However sterile may be the greater portion of the island, some farmers of Lipari have succeeded, by experiment, in proving that the southern shores will yield grapes, flax, barilla, vegetables, pulse, and fruit, and the best corn in the islands, excepting that of Alicudi: from this coast, as the ground rises to the acclivity of the mountain, a slight vegetation of lichens and dwarf shrubs affords food to several large flocks of goats. Towards the middle of this desolate valley is a spring of fresh water, conveniently furnished with a good stone trough. Upon the whole, the exports of the island seem likely to increase.

PORTO PONENTE, in the middle of the north side of Vulcano, is very picturesque, and affords excellent shelter for small vessels, in from $2\frac{1}{2}$ to 5 fathoms, bottom of black sand. In the winter a N.W. gale will, at times, set a heavy undertow into this place, but a vessel then may easily weigh and shift round to **PORTO LEVANTE**, and there lie, nearly under the crater of Vulcanello, in perfect security, on a singular sulphureous bottom.

At the anchorage in Porto Levante, internal rumblings, like distant thunder, may be heard: and, on these occasions the clouds arise from the great crater with greater activity and density.

On leaving Porto Ponente, for the westward, you pass the *Turk's Point*, an abrupt mass of lava, one mile from the port, and steep-to. Between this point and *Point Monaco*, the N.W. point of the island, is the *Cala di Formaggio*, a cave, with a rock in the centre, resorted to by fishermen during Scirocco or southerly winds.

The west coast is bold and craggy, and has a deep cavern called the *Grotta del Cavallo*, off which is a steep detached rock, the *Pietra della Quieta*, with a narrow passage between it and the land.

Half a league south from the Quieta Rock is *Cape Rotta di Batti* or *Point Rosario*, the S.W. end of Vulcano: a part of it has fallen into the sea, from the corrosion of its base, and formed a dangerous spit. Beyond this point the south coast of the island is generally bold, and the land in a good state of cultivation.*

PANARIA, AND ITS ISLETS.—Panaria lies at the distance of 10 miles E. $\frac{1}{2}$ N. true from the north end of Salina, and 5 miles N. by E. true from Cape Castagna, the N.E. end of Lipari. This island, having warm baths, was called *Thermisia* by the Romans, and numerous vestiges prove it to have been a place of consideration. It is nearly 7 miles in circuit, and contains about 200 inhabitants. Its soil is very rich and well cultivated, particularly to the eastward, and produces wheat, barley, fruit, oil, wine, pulse, and soda. Fishing is here a profitable employment. The church and village are on the eastern shore. On the south side of the island is the *Cala del Castello*, a good port for small vessels. It has been named from a hill above it, which has a peaked summit, and has the only beach of yellow sand in all the islands.

At half a league to the south-eastward of the port of Castello is a small ledge of rocks, named the *Formiche*, or *Ants*; some of the rocks are nearly even with the water's edge: around them is a depth of 10 fathoms, and the channel between them and Panaria is deep and safe, having from 10 to 15 fathoms. Large ships may anchor on good ground, between the Corvo or Crow Rock, which stands near the south point of Panaria, and the Formiche, outside the harbour, in from 10 to 15 fathoms, taking the usual precautions in winter against the sea winds.

To the eastward and south-eastward of Panaria is the cluster of islets named the **GROUP OF DATTOLI**, an assemblage of shattered fragments, which may possibly have once formed a single island.* Of these islets the northernmost, which lie $2\frac{1}{2}$ miles to the

* For the reasons, see Captain Smyth's *Memoir*, &c. page 257.

eastward of Panaria, are *Basiluzza* and *Lisca Nera*, and the former is the largest islet of the group. This is shaped like a gunner's quoin, with steep sides and a tabled surface; cultivated, although it has only three or four houses on it, and producing corn, flax, and vegetables, but much infested with rabbits. Upon it are vestiges of antient buildings.

At a mile and a quarter from the easternmost point of Panaria is the islet *Dattalo*, a white steep rock of lava, partly in a state of decomposition. In many little cavities of this curious mass the inhabitants place their rude but profitable bee-hives. Between *Dattalo* and Panaria the channel is safe, and has 30 fathoms of water.

Nearly half a mile east of *Dattalo* is a cluster of black rocks called *Panarelli*. The channel between these and *Basiluzza* is rather more than a mile broad, and has from 35 to 40 fathoms; but that between them and *Dattalo* is narrow, and has only 6 fathoms.

Lisca Bianca, *Tila-navi*, and *Bottaro*, are three islets on one bank, which extends E. by N. and W. by S. [*N.E. by E. $\frac{1}{2}$ E.* and *S.W. by W. $\frac{1}{2}$ W.*] three miles, and nearly parallel with *Dattalo* and *Panarelli*, at the distance of one mile and a quarter. The channel between is clear and good. Of these *Lisca Bianca* is the easternmost; it is a whitish rocky islet, about four miles from Panaria, small, but partially cultivated. Next to this, on the west, one mile distant, is the sterile rock *Tila-navi*, by some called *Lisca Nera*, (black) from its dark appearance, as contrasted with *Lisca Bianca* (white). In the strait between a strong smell of sulphur is perceptible, and in two places are springs of sulphureous gas, the bubbles of which rise in quick and constant succession to the surface, where they have been known to flame on bursting into the atmospheric air.

Bottaro lies about a mile to the west of *Tila-navi*; it is low and rocky. To the south-eastward of this islet, about a mile, is a dangerous shoal of rugged lava, which Captain Smyth has called *Anne's Reef*; it has from $2\frac{1}{2}$ to 5 fathoms on it, and 12 near it, in all directions. It lies with *Bottaro* and *Dattalo* nearly in one, and *Tila-navi* on the lower part of *Basiluzza*.

The EXMOUTH BANK, a bank of coarse sand, shells, and lava, lies at the distance of a league to the south-eastward of the three islets last described. It was discovered by Captain Smyth, and the depths over it are from 15 to 40 fathoms, the shoalest part being to the west. Its breadth, from north to south, is about two miles.

STROMBOLI, the antient *Strongylé*, and the north-easternmost isle of the Æolian group, lies $9\frac{1}{2}$ miles to the north-eastward of Panaria. It is a conical mountain, with an irregular base, upwards of 2000 feet in height, and about 9 miles in circumference, and seems to be the entire product of subterranean fires. The inhabitants consist of about 1200 contented and sturdy peasants, under the control of a curate.



Stromboli, W. S. W. by compass, distant about six miles.

The crater of the volcano, which faces the N.W. is about one-third down the side of the mountain from the summit: it is continually burning, with frequent explosions, and a constant ejection of fiery matter; its form is circular, and the diameter about 170 yards. This crater was visited, and has been described, by Captain Smyth, who adds, "When the smoke cleared away, we perceived an undulating ignited substance, which, at short intervals, rose and fell in great agitation; and, when swollen to the utmost height, burst with a violent explosion, and a discharge of red-hot stones, in a semi-fluid state, accompanied with showers of ashes and sand, and a strong sulphureous smell. The masses are usually thrown up to the height of 60 or 70 to 300 feet; but some, the descent of which I computed to occupy from 9 to 12 seconds, must have ascended above 1000. In the moderate ejections, the stones, in their ascent, gradually diverged, like a grand pyrotechnic exhibition, and fell into the abyss again; except on the side next the sea,

sea, where they rolled down in quick succession, after bounding from the declivity to a considerable distance in the water.

"This crater burnt, without intermission, from the earliest periods; its incessant fire is supposed to be supported by oxygen, pyrites, and sulphur, but there are no traces of bitumen. It appears to be not only the vent of all these islands, but to have a subterraneous communication with Sicily and Italy; for, previous to a severe earthquake taking place in these parts, Stromboli has been observed to be covered with dense clouds of smoke, and to emit, with increased activity, unusually ardent flames. It appears, moreover, from the concurrent relation of the islanders, to be influenced by atmospheric changes; as storms, particularly those from the southward, are preceded by thick volumes of smoke, so that the native pilots are guided at night by its flame, and gain intimations of the weather in the day-time by its smoke.

"Superstition, of course, is not idle with respect to this wonderful abyss, and Pope Gregory I. seriously believed it to be the abode of the damned."—Pope Gregory was not, by many, the only simpleton who has thought so; but how truly ridiculous is such nonsense to the rational and observant mind!

With this stupendous volcano existing upon it, it is not less true than wonderful that Stromboli is extremely fertile, has a fine verdure in the cultivated parts, and these, on one side, extend very high up the mountain. The soil is a black mould, composed of argillaceous tufa, scorice, pozzolana, and sand. The hedges are of cane reeds, which, when sufficiently strong, are cut down and used as supporters for the vines. The products are, some of the finest wines in the Mediterranean, and a moderate quantity of wheat, barley, cotton, raisins, currants, and figs.

The principal town of Stromboli is on the N.W. side, and divided into two straggling parts, the parishes of *San Vincenzo* and *San Bartolo*. The houses are low, with flat roofs, and there are not more than two or three in the whole island of two stories in height. They are thus built that the prevalent strong winds of winter may not injure them. Vestiges of antient buildings and sepulchres may still be seen. At S. Vincenzo is a constant fountain, supplied from a small spring in the mount.

The beach below the town is composed of a shining black sand, and terminates in a rocky point, where there is a large cavern, the *Grotta dilli Bovi marini*, or *Seal's Cave*: this cavern is 86 feet long, 35 wide at the entrance, and 7 high. Off the point is a steep rock, or mass of indurated pozzolana, about 240 feet high, named *Stromboluzza*, which appears, when seen at a distance, like a ship with studding sails set. There is a depth of 14 fathoms between it and Stromboli.

FROM S. BARTOLO, westward, the coast is formed of rugged lava to Point Sciarazza, or nearly a mile: off that point there is a rock, nearly even with the water's edge, a quarter of a mile out, with 40 fathoms, deepening to 70, close to it. Punta Zarroza is the N.W. point of the island, and is half a league more to the west: between these points is a cove immediately below the crater, in which, immediately under the cove, as near as can be approached, is the extraordinary depth of 47 fathoms; and, at a few yards farther out, from 65 to 90. Incessant showers of red-hot stones from the volcano frequently fall here. Off Point Zarroza are some sunken rocks, but without them are regular soundings to 60 fathoms, at about a mile out.

From Point Zarroza to the S.W. point of the island, *Punta Inostra*, the coast is a rugged lava. The village of Inostra is within the point on the East, and is distinguished by the church of S. Nicolo. The coast hence, eastward, continues rocky to *Lazara*, a small village standing on a low shingly point.

There are several caves on the eastern coast; one of these is over *Punta Lana*, the S.E. point of the island; and a little way up the hill is remarkable as the place where that bright and beautiful mineral called *Specular Iron* is found.

With the exception already noticed, on the north side of the island, there are, in general, gradual soundings all round, decreasing from 20 to 4 fathoms.

2.—THE ISLAND OF SICILY.

SICILY, the SICILIA of the antients, previously called *Thrinacria* and *Trinacia*, is more than 170 leagues in circumference, and is still the richest and most important island

island of the Mediterranean Sea. Interesting from its situation, its soil, its climate, its antient, and even its modern, history, Sicily has been considered as the nurse and granary of Italy; but its modern is very inferior to its antient consequence. Captain Smyth, however, says that, "From its favourable geographic situation, mild climate, and great fertility, from its strong military positions, secure harbours, and innumerable resources, it has ever been an object of eager contention, and must always continue to be the scene of political struggles and important events."

It has been supposed, both by the antients and moderns, that this island was once a portion of the continent, but disjoined from it by some great convulsion of nature, at a period anterior to history and tradition.

MOUNT ETNA, the most celebrated volcano of Europe, stands on the eastern part of the island, and its summit is 10,874 feet above the level of the sea. The island is intersected by ranges of hills, but of these the elevation of the highest peak is only 3690 feet.

DESCRIPTION.—SICILY is rich in minerals, of which the variety is great; and they include silver, lead, copper, &c., rock-salt, bitumen, and gypsum, with marbles, agates, and other valuable stones. The mineral waters, found in every part of the island, both hot and cold, have for ages been celebrated for their efficacy in relieving various disorders. The general temperature of the air and state of the weather are excellent; excepting that, from there being but few running streams, many morasses and pools of stagnant water are formed, the effluvia of which corrupt the air around them, and render it unhealthy. When the sun is in the northern signs, the sky, although it seldom assumes the deep blue tint of the tropics, is, nevertheless, beautifully clear and serene; but, after the autumnal equinox, the winds become boisterous, and the atmosphere dense and hazy; the dews and fogs thence increase, particularly on the coasts, and the rain falls in frequent and heavy showers.*

Early in the morning, in summer, it is generally calm; but a breeze springs up at about nine or ten o'clock, freshens until two or three, and gradually subsides again into a calm towards the evening. The winds are variable both in their force and their direction. The most prevalent are the northerly and westerly, which are dry and salubrious, producing, with the clearest sky, the most refreshing sensations. Those from the east, thence rounding southerly, are heavy, and loaded with an unwholesome mist, often accompanied with heavy rain, thunder, and lightning; during which the luminous meteor, called by seamen the *compasant*, is sometimes seen.

At about the time of the vernal equinox, the force of the S.W. wind is very sensibly felt along the West and S.W. shores, between Trapani and Girgenti; but, as the sun advances, the winds blow more from the northward, with fresh gales at intervals, which, however, are seldom experienced with violence in bays or harbours, and their power rarely continues longer than forty hours. The most experienced pilots say that storms which commence in the day-time are more violent, and of longer duration, than those which spring up in the night.

The most annoying wind is the *scirocco*, or south-east, which, coming from the deserts of Africa, is moderated by its passage over the sea to a tolerable degree of temperature; and on the east coast, where it first arrives, its effects are inconsiderable; but, seeming to acquire additional heat in its progress over the land, becomes a serious inconvenience as it advances. At its commencement the air is dense and heavy, with long white clouds settling a little below the summits of the mountains, and at sea floating just above the horizon, in a direction parallel to it. The *scirocco* generally continues three or four days, during which period its influence is such that wine cannot be fined nor meat effectually salted: though blighting in its general effects in summer, it is favorable to the growth of several useful plants in winter. This wind is particularly disagreeable at the city of Palermo, on the N.W. of the island, which is situated in a plain, surrounded on the land side by mountains, which collect the solar rays as if to a focus, and produce a most oppressive heat. At such times the streets are silent and deserted, for the natives can scarcely be prevailed on to move out while it lasts, and they carefully

* The mean heat of the sea around Sicily, at a depth of from 10 to 20 fathoms, is from 72 to 76 degrees, which is from 9 to 12 degrees warmer than the water near the coast to the westward of Gibraltar. See the Note *, page 11.

close every window and door of their houses to exclude it. In spring and autumn it is more frequent than in summer, and in winter possesses no disagreeable qualities, excepting to invalids.

In the surrounding sea, waterspouts and other meteoric phenomena are not infrequent, and it is well known that Sicily has ever been subject to alarming and desolating earthquakes, of which the most destructive have generally occurred in the first three months of the year, and mostly after heavy rains, though sometimes, also, in fine weather.

The country, at times, suffers under a drought from April to September, to the serious detriment of the harvest and vintage: particularly in the interior, where the atmosphere is less humid than on the coasts. There are a few showers in autumn, but the regular rains do not usually commence until November, between which month and March, besides occasional snow storms, they fall, at different periods, in very heavy torrents, often accompanied with vivid and very dangerous lightning. During this season, therefore, the effects of cold and humidity are very sensibly experienced; owing, in great measure, to the defective principles on which the houses are generally constructed: for in these scarcely one door or window will be found to shut properly, so that there are strong draughts of air in every direction.

The violent rains that deluge the island at this season swell the rivers, damage the roads, and set the *fiumare* running. By the last is meant the torrents, produced by the waters descending from the mountains, into deep ravines, through which they rush with impetuosity to the sea, carrying every thing before them: but their strength is soon exhausted; and, when dry, their channels become tolerable roads, to the distance of three or four miles inland, exhibiting peculiar picturesque beauties. The boisterous force of the *fiumare*, while flowing, the badness of the roads, and the want of bridges, render travelling in the winter dangerous; and, at times, wholly impracticable.

Inexperienced travellers expect no cold weather in Sicily; but in this they will find themselves greatly mistaken; though the severity of the winter is not such as to deprive the country of that pleasing aspect which it derives from the variety of ever-greens richly spread over it. Of these, the most conspicuous are the lemon and the orange trees, loaded with their golden fruit. The cold lasts but a short period; for the spring quickly advances, and a profusion of verdure is displayed around. This is the pleasing season that renders the island so delightful, and has drawn forth so many poetic strains in celebration of its charms. The summer is oppressively warm, and precludes the exercises necessary for health; whilst the heat scorches up the vegetation, and engenders innumerable reptiles and insects. Then the autumn arrives; when a few showers and some variable weather occasion disease in debilitated constitutions; under various symptoms, but chiefly under those of acute inflammations. At this time of the year the evil most to be dreaded is the *mal'aria*, or bad air, which produces a kind of yellow fever. This usually begins in June, and increases in virulence until after the first rains in September. It is supposed to originate from the excess of moisture hastening the production of putrid fermentation in decayed vegetable substances, and is generally found on the banks of rivers, near stagnant pools, on the borders of the numerous *fiumare* or clefts, and in low or marshy plains, where it is greatly promoted by the culture of rice, flax, and all those productions that require copious irrigation. This deleterious air sometimes reaches high lands, but rarely, except in instances where there are higher in the vicinity. It acts on the constitution chiefly in the night, and during sleep, with an effect more fatal to foreigners than to the natives.

THE APPEARANCE OF THE COASTS OF SICILY is romantic, and these coasts are formed, by nature, into strong positions of defence. The interior presents a combination of mountains, ravines, and valleys; the latter of which, in many parts, branch out into extensive plains, presenting a pleasing assemblage of rural scenes, possessing a soil exuberantly fertile, and animated by numerous flocks and herds, scattered around. The hilly regions, presenting, alternately, undulating slopes, bold crags, and rugged elevations, with woody declivities abounding with elms, chesnuts, pines, oaks, ash, and other timber, complete the prospect. The horses are descended from those of Barbary, but are not very good. The mules are strong and handsome. Cultivation appears general over the face of the country, but the study of agriculture is very much neglected. The plough, even of the present day, merely skims the soil: the carts, hoes, and rakes, are equally rude; and a bunch of brambles, drawn by an ox, supplies the place of the harrow. The primitive method of treading out corn by cattle is likewise still practised.

The

The fine wheat of Sicily has been celebrated in all ages. The *farro* is a long grain, nearly twice the size of the common English wheat, and generally boiled whole, as a substitute for barley or rice. The *Majorca* is an oval soft wheat, of which the flour is remarkably white, and used only for the best bread, biscuits, pastry, &c. The crop of wheat is succeeded by hemp, maize, lentils, and other pulse; and, in the ensuing seasons, generally by barley and beans, followed by mixed esculents, and a fallow. The harvest begins in the latter end of June, and continues through July and August. There are not, as have been said, two successive crops of any one thing in the year, except what are forced in such grounds as are artificially irrigated. Indeed, in many parts, from the scarcity of manure, the peasants are reduced to the necessity of leaving their fields fallow every other season.

The grape vine is one of the chief objects of agricultural attention, and from the care taken in its cultivation, proves abundantly productive, affording comfort and profit to the farmer, and considerable revenue to the state. Of the grapes there are nineteen different species; the most esteemed of which are the Zibibbo, the Carniola, the Greek, the Muscatel, the Canicula, the Dry, and the Winter, Grape, and from the greater part is expressed a variety of rich-flavoured wines. The olive is a tree that grows on most soils, but as it prefers the calcareous, which is the most common one, its culture is very profitable, and both its fruit, and the oil expressed from it, form staple articles of sustenance, as well as of commerce. The *manna* of Sicily, extracted from the bark of the *frazinus ormus*, a species of ash tree, yields an annual revenue of upwards of £40,000. sterling. The rich vegetable salt called barilla is a profitable commodity. Saffron and sumach are also articles of exportation, as are the fruit, the spirit, and the syrup, of the *carubba* or *locust*, a species of bean, the fruit of a beautiful indigenous tree, that sweeps the ground with its fine arched branches, and flourishes in most parts of the island.

The Sicilians are extremely partial to the Indian fig, or prickly pear, the fruit of the *cactus opuntia*; whole families subsist on it during the time it is in season, and find it wholesome, refreshing, and nourishing. Being a very hardy plant, it is found in every part of the island, in the greatest profusion, forming hedges and inclosures, and clothing the fissures of walls, rocks, and ruins, which would otherwise be barren. Hedges are likewise formed of the aloe, which, being also of a hardy nature, will grow even on the sands, exposed to any winds.

Pistacio nuts, figs, and almonds, abound, together with the liquorice, and many other valuable plants. "The almond trees form numerous groves throughout the island: they bud in February; and, when covered with their delicate tinted blossoms, present the most beautiful objects in the vegetable kingdom. The well-known fruit, the finest of the *amygdalus* species, ripens in July, and is produced in abundance for domestic consumption; and both the nut itself, and the oil extracted from it, are staple articles of exportation."* Such declivities of the island as are too steep for cultivation, but have the advantage of a northern aspect, produce an abundance of brush wood, consisting of the arbutus, the myrtle, the coronilla, several species of heath, the Spanish broom, and the evergreen oak. These luxuriant beauties are cut down every third year, as in that time they attain a sufficient size to form fagots.

Besides the riches of her mineral and vegetable products, Sicily commands the finest fisheries in the Mediterranean Sea. The tunny is caught in great abundance during the months of May, June, and July.† Of testaceous and crustaceous fish there are many varieties, which afford delicate food. Coral is fished for in many places, but yields the greatest profit to the seamen and merchants of Trapani, on the western side of the island.

THE PRINCIPAL CITIES AND TOWNS OF SICILY are, *Palermo*, the capital, *Catania*, *Messina*, *Trapani*, *Marsala*, *Modica*, and *Calatagirone*. The present population of the island is about 1,645,000 persons. The disproportion of nobles, in comparison with the commonalty, is singularly great; as, exclusive of the Royal family, bishops, and other church dignitaries, there are no less than 177 princes, 78 dukes, 140 marquisses, with counts, barons, and knights, almost innumerable. The consequence may be readily conjectured. "Every house is a palace, and every handicraft a profession; every re-

* Captain Smyth's Memoir, page 19.

† For an enumeration of the fish, and general exports of Sicily, see Captain Smyth's Memoir, pp. 21 to 25, and its Appendix, p. lxxi.

spectable person is addressed as his Excellency, and even a servant on an errand is charged with an embassy." The sailors are, however, described by Captain Smyth, as cheerful, hardy, and daring; temperate, sober, and courageous. They are, on the other hand, very superstitious; for every vessel has its tutelary saint, and every sea-port its churches and chapels lined with votive pictures of miraculous escapes from the perils of the sea. The peasants also are industrious and sober, with better domestic feelings than the citizens, and frequently exhibit considerable intelligence.

"One of the most obstinate practices of the Sicilians is that of still adhering to the inaccurate Roman mode of calculating time, in defiance of the dictates of common sense, and the example of the rest of Europe. The civil day commences at sun-set, and their time-pieces are altered accordingly, computing, without subdivision, from one to twenty-four hours in succession; by which absurd method twenty o'clock occurs at half-past four in the afternoon in summer, and at one in winter. Thus they are compelled to alter their noon, from time to time, by the almanac; and it frequently happens that the several members of a family have their watches going to different noons. Besides this inconvenience, the church clock strikes only from one to six hours, repeating the number four times a day, and is, therefore, of little utility to strangers."

NORTHERN COAST OF SICILY, FROM CAPE ST. VITO TO THE FARO OF MESSINA.

The north coast of Sicily presents a steep aspect, and there exist near it scarcely any hidden dangers. The most prevalent winds here are between the S.W. and N.W., and they are generally preceded by a long swell, which rises with their increase. The tides set to the eastward, but do not appear to be influenced so much by the moon as by the weather, and seldom rise or fall more than twenty inches.

CAPE ST. VITO, in latitude $38^{\circ} 13'$, longitude $12^{\circ} 45'$, is the usual landfall to ships coming from the westward. This cape is a rugged mount, with two tabled points extending from it, the westernmost of which is called *Agra*, and the easternmost *Sireno*. In the bight between is anchorage for small vessels, near the church of St. Vito, protected by two stout square towers. Similar towers are erected on commanding points, and defiladed on the land side, at regular distances, all round the shores of Sicily. The purpose for which these towers were intended was, that, on the appearance of a vessel, the peasantry should repair to the guns mounted in them, in order to prevent smuggling, to succour a friend, or to annoy an enemy. They are, however, from disuse, greatly neglected, poorly provided, and inhabited generally by only two or three countrymen, who act rather as guards for the health-office, than as soldiers. Beacons are always ready to be lighted, and the alarm along the coast is sounded with conch-shells, similar to the tuba of the Romans.

Large ships, on approaching Cape St. Vito, should give it a berth of, at least, three miles, in order to pass on the north side of a rocky shoal which lies to the northward of the cape: between this shoal and the land is an inner channel, having, in the middle, a depth of 7 or 8 fathoms. When the *Agra* tower begins to touch Mount Cofano* it marks the extremity of the shoal, on which are from $3\frac{1}{2}$ to 6 fathoms of water, with from 12 to 30 and 50 outside. In heavy gales the sea breaks all over it.

Within the point of *Sireno* (which has a shelf tailing off it), on the eastern side of the promontory of St. Vito, is the profitable fishery of S. Biro.

The GULF of CASTELL' a MARE is the spacious bay between the land of St. Vito and *Point Rama*. The distance between is 10 miles. This bay, generally, has deep water, and good anchorage near its shores; but it is unsafe in winter, being exposed to northerly winds, which send in a heavy swell, and mostly blow home.

In the bottom of the bay, at 11 miles South [*S. by E. $\frac{3}{4}$ E.*] from *Sireno* tower is *Castell' a Mare*, a mean dirty town, containing about 5000 inhabitants: yet this town is situated in a finely cultivated neighbourhood, and its people subsist by exporting the produce, of which wine, fruit, grain, manna, and shumac, constitute the principal arti-

* Cape Cofano, the outer extremity of this mount, which appears like a rugged conic rock, is two leagues to the south-westward of *Agra* tower.

cles. The castle, erected on a rocky tongue of land, and never strong, is falling fast to decay, while the road leading from the cove to it is so filthy and narrow, as to be even dangerous by night. At a little distance from Castell' a Mare are the interesting remains of a Doric temple, which, with vestiges of an antient theatre, a little to the northward, are the only relics of the antient *Ægeata*, said to have been built by the Trojans.

At three miles to the eastward of the town of Castell' a Mare is the village of *Magazinazzi*; and, at 3 miles farther, that of *Sicarra*. From Castell' a Mare, by these villages, the coast is low and the beach sandy, which contrasts with the opposite side. The N.E. extremity of the gulf is a long tabled cliff, *Cape Rama*, within which, to the eastward, is a conic mount, distinguishing the little towns *Favorotta* and *Cernisi*, which stand under *Mount Orsa*. This elevation, from being seen far off at sea, is generally called *Cape Orsa*. Vessels arriving in summer, to load the manna, carouba, and other produce of the plain, lie off the low white cliffs of *Favorotta*, but not far from the sandy beach, in from 5 to 9 fathoms. In standing in, towards *Cernisi*, *Point Molinazzo*, which is to the N.W. of it, must have a wide berth.

FROM POINT RAMA to *Point Uomo Morto*, the West point of *Cape Orso*, the distance is 4 miles N.E. by E. $\frac{1}{2}$ E. The coast between is irregular, and thence trends to the eastward. From the point last mentioned to the little isle *Femina* the bearing and distance are nearly East, 6 miles. Between is the Bay of *Carini*. From *Femina* to *Cape di Gallo* the distance is $4\frac{1}{2}$ miles E. by S.; and from the last to the extremity of the picturesque land, called *Mount Pellegrino*, $3\frac{1}{2}$ miles, S.S.E. On this mount are two signal-towers.

About the Points *Uomo* and *Orsa* the coast is low and shelving. Each point is defended by a good tower, and off the latter is a good fishery. In the Bay of *Carini* is anchorage with southerly winds, but the water is shallow towards the shore.

At the bottom of the Bay of *Carini*, on the banks of a rivulet which waters the luxuriant vale of that name, once stood the small but rich city of *Hycara*. On a rising ground, two miles to the southward of this, stands the respectable town of *Carini*, in a beautiful situation, ornamented with a Gothic castle, several churches, convents, and public buildings. The isle *Femina* is the eastern extremity of *Carini* Bay. It is a rock, rather steep at the north end, and has a strong tower on its summit. There is a passage between it and the coast, through which small boats may pass, and the other parts are bold-to. On *Monte di Gallo* are several caverns, inhabited by goatherds. The cape of this name is a rugged cliff, with brownish red patches, appearing, from the offing, like an island. On rounding the cape a high conic rock will be seen to the south-eastward, at the distance of about four leagues: this is *Cape Zaffarana*, the easternmost promontory of the BAY of PALERMO, which is altogether clear of danger.

BAY of PALERMO.—On rounding *Cape di Gallo*, the beautiful Bay or Gulf of Palermo opens to view. The city of PALERMO (the antient *Panormus*) is three leagues to the southward of the cape, and the high land between is that of *Pellegrino*. At the most favourable points of the bay along shore are tunny fisheries, the nets of which must be carefully avoided by vessels approaching, they being so strong and well moored as to be capable of suddenly arresting a ship under full sail.

To the N.E. of the city is a fine mole, extending southward from the arsenal, nearly a quarter of a mile, into 9 and 10 fathoms of water, with a lighthouse and battery at its termination. This light, says Captain Smyth, in common with all the others in Sicily, is very defective, but the whole is a noble and spirited undertaking, which cost the senate nearly a million sterling, and forms a convenient port, capable of containing a great number of vessels. Besides this port, there is a small cove in front of the town, called *Cala Felice*, the only remains of the two celebrated antient harbours, the sites of which are still to be traced among the streets of the city.

The *Pratique Office* is on the east side of the *Cala Felice*, and the usual landing place is at the steps close to it. The *Lazaretto*, a dirty and inefficient establishment, is in a rocky bay, called *Acqua Santa*, at the back of the mole (northward) under *Mount Pellegrino*, and near the elegant palace of Prince Belmonte.

Opposite the central part of the *Marina*, or *Strand*, there is a shoal, which, from its situation, size, materials, and form, Captain Smyth thinks must have been created by silt and mud progressively accumulating over the hull of one of the ships sunk in the sanguinary conflict that took place here, after the death of De Ruyter, in 1676.

Palermo

Palermo stands on a large fertile plain, which, from its shape, from being surrounded by mountains, and from its luxuriance, is called the *Vale of the Golden Shell*, and gives the city the agnomen of *Felix* (Happy). The air is salubrious in general, but in some parts, on the site of the antient ports, mal'aria is generated in autumn. The health of the population, amounting to nearly 180,000 persons, is assisted by the general cleanliness of the streets, and the abundant supply of water. Most of the houses are provided with fountains, even to the second and third stories, which not only promote salutary ablutions, but is one of the greatest luxuries. There is an abundant supply of provisions of every description. During the absence of the moon the principal streets are well lighted. The town, however, lies low, so that after heavy rains it is extremely muddy, at which times recourse is had to moveable iron bridges for crossing the streets.

The city is surrounded by an old wall, of little or no strength, some of the bastions being occupied by gardens, while others have been cut away to increase the breadth of the *Marina*, a public drive on the sea-shore. The citadel stands on the western bank of the *Cala Felice*; it is calculated for temporary resistance only, but there is a respectable fort, called the *Galita*, on the opposite side of the cove, and the mole-head battery is tolerably strong.

"Palermo is regularly built; and, with a better finish, might be esteemed an elegant city; but it presents an incongruous mixture of pomp and poverty, of fascinating gaiety and disgusting wretchedness, exemplified in noble ranges of palaces, disgraced at their bases by the stalls, shops, and *mezzanini*, or lofts, of the lower orders, together with gaudy equipages parading the same street, with sturdy mendicants," &c. "Swarms of priests, nobles, officers, and other loungers, yawn on chairs before the coffee-houses; and the cobblers, tailors, coopers, carpenters, and artisans of every description, at their respective employments, outside their shop-doors, complete the usurpation of the sides of the streets, driving foot passengers to run the gauntlet among the numerous carriages."

"Two principal streets, upwards of a mile in length, divide the city into four quarters; and, at the point of intersection, is a handsome octangle, called the *Quattro Cantoneri*, or *Piazza Vigliena*: besides this, there are several public places, or squares, ornamented with obelisks, jets d'eau, and sculpture. There are, also, many libraries, theatres, hospitals, and other public institutions, with various edifices well worth visiting.* On passing through the *Porta Felice* a fine *Marina* presents itself, formed by a noble line of palaces fronting the sea, and a carriage road, with a broad pavement, called the *Banchetta*, for pedestrians, where natives of all ranks enjoy the refreshing sea-breeze, called *Mamatiti*, in the evening. The beauty of the prospect, the multitude of loungers, and the concourse of carriages, render it an animated and amusing scene. At the eastern end is a botanical institution, consisting of an elegant building, in which lectures are delivered, with a garden annexed. Adjoining to this is the *Flora*, a beautiful public garden, planned on the very spot where the hellish exhibition of the *Auto-da-Fe* was wont to take place. Here are now luxuriant rows of orange, lemon, citron, and lime-trees, supported on trellises, forming avenues along the principal walks, and dividing parterres of odoriferous plants, watered by several fountains. The time for seeing these grounds to most advantage, is when they are illuminated for the festival of *Santa Rosalia*, a superb pageant, annually exhibited from the 9th to the 13th of July; during which the great variety of trees, shrubs, and flowers, the murmuring of the fountains, the cheerful strains of music, and the radiant glow of 20,000 lights, combine to charm the senses and to inspire delight.†

On a rising ground, and in a romantic situation, at three miles south-westward from Palermo, is the little city of *MONREALE*, which is distinguished by a cathedral and many remarkable edifices. The road leading to it extends in a straight line from the Cassaro, through the luxuriant plain, to the foot of the mountain on which the city stands.

ON SAILING INTO THE BAY OF PALERMO, a ship may proceed boldly towards the anchorage, only being guarded on passing the little sandy bay of *Mondello*, which lies within the *Turret Point* of Cape di Gallo: for violent and squally gusts of wind issue, at times, from between Mount Pellegrino and Cape di Gallo, especially in winter. It is,

* For Description, see Capt. Smyth's '*Memoir*,' &c., pp. 75 to 91. In the Observatory the celebrated Piazzi discovered the planet *Ceres*, 1st of January, 1801, and thus immortalized his name.

† Captain Smyth's '*Memoir*,' page 84.

therefore,

therefore, proper, on standing along the west side of the bay during a fresh breeze, to station hands by the sheets and halyards, and be ready to keep large.

PALERMO, as already shown, is on the S.W. side of the bay. The best anchorage off this place, for a temporary stay, is in an angular direction off the mole, in from 16 to 25 fathoms. Ships should moor with the small bower to the *true* N.W. and the best to the S.E. Keeping an open hawse to the N.E.: and, if blowing from the eastward, in winter, they ought to ride with a cable and a half on each bower. Should the gale increase, strike lower yards and topmasts, let go the sheet anchor underfoot, and bend the spare cable, as precautions for the worst weather. But though a heavy sea *sends* in, it never rolls home, and Captain Smyth adds, I do not believe that there is the slightest danger, having myself rode out several severe gales.

Chain cables are to be preferred for a certain spell, because a long range is like backing the bowers, and, as several anchors have been lost, they may cut the hempen cables. If a ship parts in N.E. winds, she must inevitably go on shore on the reef under the citadel; for the long swell that sets in from that quarter, renders all exertions to clear it useless. The best spot appears to be in 19 fathoms, stiff clay, about half a mile off shore, with the Mole-lighthouse N.W. by N.; the town of Monreale over the middle of Palermo, W. $\frac{1}{2}$ S.; the summit of Mount Pellegrino, North; Corsari tower, on the south shore, S.S.E.; and Point Gerbino, the eastern extremity of Palermo Bay, S.E. by E. $\frac{1}{2}$ E.

The MOLE is capable of containing a great number of vessels, although there is a shoal bank in middle of it*. The inner port is reserved for the use of the arsenal, having large magazines for naval stores, and prisons for galley slaves. Ships on entering brush the mole-head, and on passing lay out the best bower to the S.W. and haul the stern close to the pier; for the winds that rush through the valley of the Conca d'Oro (*Golden Shell*) are often troublesome. The central part of this port is rocky as well as shallow.

Small craft take shelter in the cove, *Cala Felice*; and here, in summer, vessels of 200 tons may lie securely: but sea-winds occasion a disagreeable grown or ground swell. Water is procured at the quay by filling the casks with hoses that lead into the boats.

There is anchoring ground, near the shore, almost throughout the Bay of Palermo: the exceptions are, a large patch of foul ground, on which the sea breaks heavily during offing winds, stretching from the castle and *Cala Felice*, and along shore into the Mole-harbour; and, the small foul spot, nearly opposite the central part of the Marina, carrying 11 fathoms of water, and deepening to 18 and 20, where several anchors have been lost.

CAPE ZAFFARANA AND COAST TO THE S.E. — Cape Zaffarana appears from seaward like an island, detached from the high tabled land on the west. It is of a conical form, and considerable height, with a large rock off its base, and a narrow passage, of 4 fathoms in depth, between. The approach is steep, carrying from 15 to 20 fathoms close in. At $2\frac{1}{2}$ miles S.E. $\frac{3}{4}$ S. [*S.E. by E.*] from the cape are the *Reefs of Solanto*, which are two ledges of rocks, even with the surface of the water, with 40 fathoms around them, at a short offing distance, and 27 to 15 in the channel between them and the coast.

Within Cape Zaffarana, southward, at three miles from the cape, is the castle and *tonnara*, or tunny fishery, belonging to the king. Two miles and a half more to the southward is the town of *Milicia*, and beyond this, nearly two miles, the smaller town of *Mandero*. The interval between the cape and Mandero is called the *Bay of Solanto*, and here ships, unable to fetch into the Bay of Palermo, during a westerly gale, may take good anchorage, only avoiding the Rocks of Solanto on going in.

Five miles to the south-eastward [*E.S.E.*] of Mandero is the town and castle of *TERMINI*, the antient *Thermæ* or Baths, of which there are now few vestiges. The present town, standing on the declivity of a picturesque hill, makes a respectable appearance from the sea. The castle, situated on a high rock, entirely commands the town and coast. The streets are, in general, narrow and dirty, but there are some tolerable buildings, and a population of about 11,000, who derive considerable profit from a fishery of anchovies, and the export of oil, wine, shumac, corn, and rice: this port, having been privileged by Charles V. as a *caricatore*, or loading place, is endowed with immunities for

* See Captain Smyth's beautiful plan of the Environs and Gulf of Palermo.

exporting the produce of the country : but, as the anchorage is exposed during two-thirds of the year, it can be frequented by boats only that can be drawn up on the beach.

At five miles eastward of Termini is the site of the antient *Himæra*, celebrated through one of the most disastrous battles recorded in history, and subsequently destroyed by Hannibal. Two miles eastward of this is the mouth of the *Fiume Grande*, one of the largest streams of Sicily. The country hereabout, though rich and picturesque, ranks among the most unhealthy parts of Sicily : almost the whole of its inhabitants are poor and sallow, and general sufferers from mal'aria.

CEFALU, &c.—At $3\frac{1}{2}$ leagues East [*E. by N. $\frac{3}{4}$ N.*] from the mouth of the Fiume Grande, and on a low projecting point, under a high conical mount, is the town of *Cefalu*, which contains about 9000 inhabitants, and a large cathedral. On the summit of the mount are the ruins of an antient Phœnician edifice, and of a Saracenic castle, &c.

On the western side of Cefalu is a small sandy bay, where coasters find summer anchorage, with from 3 to 7 fathoms ; and there is a small pier for the reception of fishing-vessels, to the N.W. of which, at a very small distance, are two shoals, with 8 and 9 fathoms of water on them.*

Within Cefalu, on the east, is a small cove, called *Calura*, where coasters may take shelter under the protection of a tower on the point. Eastward of this, the country, for several miles, as far as the romantic castle of *Pollina*, possesses many picturesque beauties, and is intersected by the *River Ambrosia*, which runs through a deep valley between the mountains. From this valley rush such gusts of wind as to occasion the spot to be called *Mala Portuso*, or *Bad Hole*. It may be known from the offing by the high mount to the eastward of it, which is crowned by the castle of *Pollina*. The adjacent country, eastward, is very fertile, producing wine, cork, oil, silk, flax, manna, timber, and charcoal. The coast continues, with little variation of feature, to the little towns *Tusa* and *St. Stefano*, the approaches to which are quite free from danger, and may be regulated by the lead.

CARONIA.—At 6 leagues to the eastward of Cefalu, on the summit of a rugged hill, in the skirts of a large forest, is the little town of *Caronia*, protected by a castle. The neighbouring forest is the largest in Sicily, and produces great quantities of oak, elm, pine, and ash, of excellent quality : but many of the finest trees are annually felled only to be converted into charcoal. Eastward of the *Fondaco*, a kind of inn, or rather stable, at *Caronia*, are several rocks above water, called *i Sorci*, the *Mice*, and a mile to the eastward of them are others called the *Rats*, but all are close in-shore, with a regular approach, carrying 20 fathoms, within a quarter of a mile of the beach, bottom of clay and sand ; and thus it continues nearly to Cape Orlando, more than 5 leagues to the north-eastward.

The town and hamlet of *Sta. Agata*, at 7 miles eastward from *Caronia*, stand on the beach of a level fertile country, excessively afflicted with mal'aria, except in a few places where charcoal is made. Within a short walk of *St. Agata* (eastward) is the *Rosa Marina Fiumara*, a beautiful torrent, the banks of which are covered with mulberries, oleanders, and myrtles. Near this, on a hill, is the town of *S. Marco*, finely situated, and containing about 2,600 inhabitants. The produce of the country hereabout is honey, corn, wine, and silk.

CAPE ORLANDO.—This Cape bears from Cape di Gallo S.E. by E. $\frac{3}{4}$ E. [*E. $\frac{1}{2}$ S.*], $22\frac{1}{2}$ leagues : from Cape Zaffarana E.S.E. $\frac{1}{4}$ E. [*nearly East*] $14\frac{1}{2}$ leagues : and from Cefalu E. $\frac{1}{4}$ S. [*E. by N. $\frac{1}{2}$ N.*] 32 miles. It is a steep rock, of moderate height, crowned by a ruinous pile called the Castle, but which is, in fact, nothing more than a church and place of interment for people who are wrecked on the rocks below ; a catastrophe too frequent, as the place is remarkable for sudden squalls and heavy swells. Off the cape, at a little to the westward of it, is a ledge of rocks, just above water, upon which several vessels have been lost. Between the reef and beach is anchorage for small craft.

* "When small vessels are surprised here, or indeed on any other part of the coast, by fresh winds, and are unable to haul up on the beach, they are anchored and abandoned ; for, by an absurd regulation, Sicilian under-writers are not liable to pay any portion of the loss for a vessel stranded, if it appears that a man was on board ; as they assert, that a person, under the influence of terror, might cut the cable. When, therefore, bad weather is approaching, they have only to moor with their best ground tackle and repair on shore, leaving the vessel to the mercy of the winds, waves, and saints !" — *Captain Smyth's Memoir*, p. 96.

On rounding the cape to the eastward, there will appear two small projecting rocks, jutting out like moles, where the small country boats sometimes lie. In a bight farther on is the village of *S. Gregorio*, a *caricatore*, or privileged place, for timber, with an anchorage against westerly winds, and tolerably protected, except from the north. On proceeding along, the country appears more mountainous, but not less pleasing and fertile. Here the town of *Naso* will be seen, standing on a hill, the site of the antient *Agathyrnum*, in a fine woody neighbourhood, with some store-houses on the sea-shore below it.

At about four miles eastward from Cape Orlando is *Brolo Castle*, a ruinous structure, which stands on a steep cliff in a fertile valley, formed by the meeting of several *fumare* or *defles*. Nearly three-quarters of a mile to the northward of the castle, is a rock, 16 or 17 yards in circumference, and 20 feet above the level of the water, with an intermediate channel, 9 fathoms in depth, but which should not be taken unless in case of necessity, as there is a wash to the westward [*W.S.W.*] from the large rock, and about half-way over to the shore. Here, Captain Smyth says, I have found good riding, even in winter, although it is exposed from N.W. to N.E.; yet the most troublesome winds are those from the southward, as they blow with great violence by the height on which stands the town of *Piraino*. From the Brolo Rock Cape Calava bears E. $\frac{1}{2}$ N. [*N.E. by E. $\frac{1}{2}$ E.*] $4\frac{1}{2}$ miles, and on the meridian of the eastern sides of the isles *Vulcano* and *Lipari*, from the first of which it is distant 10 miles. Nearly half a league to the westward of Cape Calava is the little town called *Gioiosa Nuova*, standing at the foot of the mountains, in a very unhealthy situation.

BAY of PATTI, &c.—From Cape Calava to Point Tyndaris the bearing and distance are S.E. $\frac{1}{2}$ E. [*E.S.E. $\frac{1}{2}$ E.*], $6\frac{1}{2}$ miles. The coast between is the shore of the *Bay of Patti*, within which, in an amphitheatre of fine hills, is the town of that name, containing about 4000 inhabitants. The bay is perfectly safe, with attention to the lead, as it is deep, with regular soundings, and a good bottom of sand and clay: it is only to be noticed that, near the centre, is a large rock above water, with two smaller ones near it, distinguishable at some distance, and, therefore, not dangerous. These are called *Nicolo Rocks*: the channel between them and the beach is perfectly safe, and affords summer anchorage; but it is necessary to sight the anchors every third or fourth day, as the sand is apt to bank; particularly after a breeze.

A fine plain leads from the Marina of Patti to a pass among the hills called the *Scala di Tindari*, on the summit of which are the vestiges of the antient city of Tyndaris. The *Scala* leads down the hill to the unhealthy village of *Olivieri*, which stands on the banks of the *Elicona rivulet*.

Point Tyndaris is bold-to, and has a monastery on its summit, by which it may be distinguished at a great distance. A singular little roadstead, on its eastern side, is called *Port Madonna*, and here small vessels lie sheltered from all winds: its circumference is not above half a mile, and its depth, in the middle, 14 feet. A sand-bank extends from it to nearly half a mile in the offing, which ships must avoid by giving it a wide berth, steering well to the eastward.

The BAY of OLIVIERI has excellent anchorage, in from 8 to 30 fathoms, and, therefore, for vessels of every description. By those bound to the westward it may be advantageous, if obliged to bear up from heavy gales; as it may always be fetched, and is, in some degree, sheltered, by the *Æolian Islands* and the shoal of *Madonna*, from the strong northerly sea: but it is afflicted with a very unhealthy atmosphere during several months of the year. The best place for mooring, as recommended by Captain Smyth, is in 15 fathoms, stiff clay, about a quarter of a mile off shore, with Point Tyndaris N. by W. $\frac{1}{2}$ W.; the Convent over Port Madonna, N.W. $\frac{1}{2}$ N.; the Baronial Palace of Olivieri, S.W. $\frac{1}{2}$ W.; the village *Falcona* S. $\frac{1}{2}$ E.; *Milazzo Lighthouse*, N.E. by E. $\frac{1}{2}$ E. The best way of mooring is true W.N.W. and E.S.E., with open hawse to the northerly wind and sea. The variation of the compass here, in 1814, was $18^{\circ} 10\frac{1}{2}'$ W.

From Olivieri, north-eastward, a sandy beach extends along a fertile plain, studded with the towns of *Fornari*, *Barcelona*, *Pozzo di Gotto*, and several villages, to the back of the city and the promontory of *Milazzo*. The last, which is a mass of granite, two miles in length, nearly north and south, is bold-to, excepting at its N.W. extremity, where there are some steep rocks above water, named the *Porcelli*. At about one-third of a mile eastward of these is a miserable little light-house, beyond which, to the eastward and southward, the coast of the promontory is, in general, bold-to. At less than half

half a mile southward from its N.E. extremity there is, however, off *Point Presso*, a shoal of 3 fathoms: but, at three-quarters of a mile from the same point, in *Paradiso Bay*, anchorage may be found, in from 10 to 14 fathoms, sandy ground.

MILAZZO.—The city of MILAZZO (ant. *Mylæ*) is situated on the southern part of the peninsula or promontory of Milazzo, facing the east, and upon the bay of the same name. It contains about 8000 persons, and is divided into the *Upper* and *Lower Towns*, both of which are irregularly built, and destitute of any remarkable edifices. The people, who appear to be industrious and contented, subsist by the exports of wine, silk, fruit, rags, soap, red and white argols, corn, olive and linseed oils, tunny-fish, &c. An inclosed sea-battery, at the south part of the town, is called *Fort St. Elmo*. The citadel is to the N.W. of the Upper Town, and is about 320 feet above the level of the sea: it commands both towns, the port, and the promontory.

The *Pratique or Health Office* is under Fort St. Elmo. The watering-place bears from the shipping in the road about S. $\frac{1}{2}$ W. [*S. by E.*], and is on a fine sandy beach, where, as the stream separates into several brooks, it is convenient for many boats at a time; the quickest method of filling is by handing buckets.

MILAZZO BAY is spacious and deep, with a firm bottom of mud and blue clay in deep water, and sand near the shores. It is little affected by tides, but the anchorage is greatly injured by the custom of leaving the large stones with which the tunny-nets are secured, and the evil increases annually. The most eligible berth for anchoring is off the Lower Town, and a ship should moor with her best bower to the southward, weighing the anchors at intervals, if remaining long; for the bottom is so adhesive that, if they sink deep, it requires the most powerful efforts to purchase them. In 25 fathoms, stiff mud, and about a quarter of a mile off shore, is the spot recommended by Captain Smyth, with a rock off the N.E. end of the Upper Town, called the Beacon Rock, bearing N.E. $\frac{1}{2}$ N.; the Castle North; Fort St. Elmo nearly W. by N.; and Cape Rasaculmo E. $\frac{1}{2}$ S. the last about 14 miles off.

To vessels impeded by the wind, on the passage to the westward, the Bay of Olivieri, already described, is to be preferred, as a place of shelter, to that of Milazzo: because, from the length of the promontory of Milazzo, ships, on rounding the point, are often unable to fetch the proper berth, and have, in consequence, been under the necessity of keeping away for the Faro of Messina.

From the lighthouse of Milazzo to Cape Rasaculmo the bearing and distance are nearly E. by S. [*E. $\frac{1}{2}$ N.*], 18 miles. Between Milazzo and the cape, the coast forms a deep sandy bay, with several large fiumaras running into it. The banks of the fiumara teem with mal'aria, but the heights and most convenient spots are covered with towns and villages, of which the most considerable, on the sea-shore, is *Spadaforda*, 6 miles from Milazzo, which is situated amidst beautiful scenery, but is decaying, unhealthy, and dirty. Near this town, or at about 6 miles to the eastward of Milazzo, there is good anchorage for all vessels, keeping an eye to the sea-winds in winter, in from 8 to 25 fathoms, sand and mud; the best place is nearly opposite the Baronial palace, about three-quarters of a mile off shore.

CAPE RASACULMO is a fertile tabled promontory, of moderate height; on its outer point stand the remains of a strong Saracenic tower, and near it a turret with a telegraph, erected by the English during their occupation of the island. There are several sand-hills under the cape, and some low rocks at its base, called *Pietre del Rais*.

At about two miles to the eastward of Cape Rasaculmo are the fiumara and fishing-village called *Acqua Ladrone*, which may be known by a high mound of white sand on the eastern side, called *Arena Bianca*. Off this spot is excellent anchorage, in from 12 to 20 fathoms, fine stiff mud; and the way to bring-to, is to stand in until the beach of Faro Point bears S.E. $\frac{3}{4}$ S. [*S.E. by E.*], distant 5 or 6 miles, when the best bower may be dropped. A bottom of fine hard sand extends hence, two miles eastward, to the village of Mondello, and to upwards of three miles in the offing; but opposite to Mondello the ground is broken, with rocky patches, deepening suddenly to 45 fathoms, and then shoaling rapidly towards the Faro Point, but not dangerous to ships under sail.

The CALABRIAN COAST, from Cape Vaticano to Scilla, has been already described in page 132, and the low sandy shore of Gioja is therein particularly noticed. To strangers bound to Messina, on passing Milazzo lighthouse, in thick or blowing weather, Captain Smyth has given a special caution, that they may not pass the mouth of the Strait, by

mis-

mistaking the land, "there being more the appearance of a strait to the southward of Cape Vaticano; and the error has proved fatal to many vessels, as it forms the most dangerous lee-shore in the Mediterranean Sea."*

THE EASTERN COAST OF SICILY, FROM THE FARO POINT TO CAPE PASSARO.

FARO or STRAIT of MESSINA, IN GENERAL.—The FARO POINT of Sicily was the *Pelorum Promontorium*, or *Cape Pelorus*, of the antients. From Cape Rasaculmo to this point the bearing and distance are nearly E.S.E. and S.E. $\frac{1}{2}$ E. 8 miles; and, from the Faro Point to the Rocks of Scilla, (already described on page 132,) S.E. by E. $\frac{1}{4}$ E. [*E. by S.*], 6047 English yards, or 3023 $\frac{1}{2}$ fathoms.

The FARO POINT is low and sandy. On its eastern extremity is the lighthouse, constructed 200 years ago, on the ruins of an antient tower, and which is strongly fortified. On the point are also two sea-batteries and two martello towers, the whole of which are commanded by the Telegraph Redoubt, which stands on a hill at nearly a mile and a half westward from the lighthouse. The village of Faro is a quarter of a mile south-westward from the lighthouse; it is small and dirty, but the country about is very picturesque, and produces the rough wine, like the *Falerian*, formerly celebrated under the name of *Mamertium*. Between the beach and the hills, on the East and South, are two large sheets of water, united by a canal, which are named, from their figure, the Round and Long Lakes, and in which are the best eels and cockles in Sicily.

The CURRENTS of the Strait of Messina have been frequently noticed, both by the antients and moderns. It has been said that, "they are governed by the moon; and, although there is neither rise nor fall of the tide produced by them, yet that which runs to the northward, is called the flood, and that which runs to the southward, the ebb: it flows, on the full and change of the moon, till 9 o'clock. The mid-channel currents run a little more than six hours each way, subject, however, to the influence of the winds, which often accelerate, or retard, them an hour, or even two: and it is to be observed, that, when the flood-tide is running, there is always a strong eddy, running in an opposite direction, to the southward, near both shores; and, when the ebb-tide is running, the eddy runs to the northward: the currents, in the narrowest part of the strait, run at the rate of 6 to 8 knots."

Upon this subject Captain Smyth has said, "The currents in the Faro are so numerous, and so varied, with respect to their duration and direction, that I found it very difficult to ascertain any thing with precision, as one series of observations seldom agreed with another; but I have generally found the statements of the most experienced pilots, after making due allowance for localities and weather, approximate very near to each other. In settled seasons there is a central stream, running north and south, at the rate of from two to five miles an hour; and which, though, properly speaking, only a current, when uninfluenced by strong winds, is governed by the moon. On each shore there is a counter, or returning, set, at uncertain distances from the beach, often forming eddies to the central current; but, in very fresh breezes, the lateral tides are scarcely perceptible, while the main one increases, so as to send, at intervals, slight whirlpools to each shore. There is, in general, an uncertain rise and fall of a few inches; but, before the vernal equinox, when the sun is nearest the earth, and the moon in her perigee, they rise to 18 or 20 inches. When the main current runs to the northward, it is called the ascending or flood; and the contrary, the descending or ebb. There is usually an interval of from about 15 to 60 minutes between the changes, and the tide runs six hours each way; though I have known it, during a S.E. gale, (which has the greatest influence,) flow to the northward upwards of eight hours. By the most precise observations I have been able to make, it is high-water, on the days of full and change of the moon, off the Faro Point, at 6 h. 56 m., and in the harbour of Messina at 8 h. 10 m."

* In the delightful series of Views, which illustrates Captain Smyth's Atlas of Sicily, &c., there is one (on Plate 10) of the Faro Point, and coast to the eastward, intended to prevent this error. "There are two tabled tongues of land, resembling each other, to the southward of the bight of Vaticano, and it is between the two that the entrance of the Faro of Messina will be found."

A bank extends about a quarter of a mile from the Faro Point to the eastward, having on it from 7 to 30 fathoms of water, and affording tolerable anchorage for ships that wait for a passage either to the southward or westward, in a situation preferable to that off Acque Ladrone, more to the west, as there a vessel is liable to be caught by sea-winds, when, although she may ride easily, it will be difficult to weigh and gain the strait. In order to obtain a berth here, you should stand on the bank by the lead until the lighthouse bears nearly N.W. by W. [*W. by N. $\frac{1}{2}$ N.*], 350 or 400 fathoms distant, where you will find about 15 fathoms, with sand. It is to be noticed that, at about a quarter of a mile to the north-eastward is a foul spot, which may damage cables. The best bearings, as given by Captain Smyth, are Cape Vaticano N.E. $\frac{1}{2}$ N. [*N.N.E.*]; a convent over the town of Palma, E. $\frac{3}{4}$ N. [*N.E. by E. $\frac{1}{2}$ E.*]; Scilla Castle, S.E. by E. $\frac{1}{2}$ E. [*E. by S.*]; and the city of Messina, S.W. by W. $\frac{3}{4}$ W. [*S.W.*] This place, however, is exposed to the whole strength of the winds and currents, and therefore to be considered only as a stopping-place under favourable circumstances.

The eastern side of the Faro, with the phenomenon called the *Fata Morgana*, have been described on our preceding pages, 132, 133. The opposite or Sicilian coast has scarcely a hidden danger. It is generally bold-to, and so clean, that the largest vessels may approach it by the lead, as near as can be requisite. The tides and currents are, of course, affected by those of the Faro, and heavy gales cause a strong northerly or southerly set, which must be particularly allowed for, in shaping a course. In mid-channel of the strait, no bottom is to be found with a line of 200 fathoms.

BETWEEN the FARO POINT and the PORT of MESSINA, a distance of 6 miles, are several excellent sandy bays, affording eligible shelter for shipping in general; more particularly off the fishing-village of *S. Agata*, at $2\frac{1}{2}$ miles from the Faro Point; and off the *Grotta*, having a church with a dome, at a mile more to the S.W. There is, likewise, anchorage at a mile farther, off *Paradiso*, a beautiful spot, two miles northward of Messina; but here are some foul patches.

On both sides of the Channel, pure, though rather hard, fresh water may be procured, by digging a hole in the sand, within two or three feet of the margin of the sea.

THE FARO CHANNEL is entered on passing the lighthouse, and has always been used, as an expeditious route, by those, bound to the south-eastward, who have not been accustomed to a 'coat of terrors and a cap of fear.' From the baffling winds to be expected, caution is, however, requisite, and the safest way is to keep over towards the Sicilian shore, as the current frequently sets towards the rocks under the *Torre di Cavallo*, between Scilla and Point Pezzo, on the eastern coast: but, even on this side, the beaches are so steep that the stream enables vessels to glide safely along them. In light breezes, the current may, at times, be stronger than the ship's effort, and may turn her round, but no actual danger need be apprehended.

No stranger should attempt to push through in the night, unless with a fine free wind: and, it is to be observed that, the light of Messina cannot always be distinguished from those of the fishermen, who, in every tranquil night, cover the straits with their boats. Precautions are, likewise, to be taken against the heavy gusts which, at times, issue from the defiles (*fumare*) of the mountainous coast, and upset small vessels.

MESSINA.—The port of Messina is a large basin, of a circular form, most eligibly situated for commerce, and one of the most beautiful, commodious, and safe, that can be imagined.* It is open on the N.W., the entrance being 500 yards wide, and is inclosed on the N.E., East, and South, by a low sandy tongue of land, in form of a crescent, and called the *Braccio di St. Rainiere*. On the north end of the jatter is *Fort Salvador*, a long irregular structure, which flanks the entrance; to the S.E. of this are the *Flotilla-arsenal* and *Lazaretto*: eastward of the latter, on the back of the *Braccio*, is the greater lighthouse, square, and surrounded by a fort. On the south side of the harbour is the Citadel; next to which, on the S.W. side, is the great Arsenal, and all along the west side is the *Marina*, or Strand, and city of Messina. The entrance is defended on the west side by *Porta Reale*, which is 700 yards without the harbour.

THE MARINA is an excellent wharf; which extends upwards of a mile, and it always presents an active scene, exhibiting the merchant-ships of all nations, with their bowsprits over the quay, and the operations of shipping and discharging, which are here

* A very fine view of it is given in Captain Smyth's Atlas.

most conveniently performed. A statue of Neptune ornaments it. The pratique-office, the fish-market, and the custom-house, are all on the Marina; and parallel to it are the ruins of some magnificent buildings, in which are eleven arched gateways, leading to as many different streets.

Messina, formerly *Messana*, stands at the foot of the mountains, on the site of the more ancient *Zancle*, a Grecian colony: but of *Messana* no vestiges of any consequence remain. The present city contains a population of about 73,000 individuals. It is regularly built, well paved with square blocks of lava, and several of the streets are wide and handsome, containing numerous churches, convents, and capacious edifices, ornamented with statues and fountains. But in various places, particularly about the Marina, the ravages of the disastrous earthquake of 1783, which shook Sicily to its foundation, are yet visible, and earthquakes have been frequent here. An old irregular wall surrounds the city, and above it are two strong forts, *Gonzaga* and *Castellaccio*.

The city is delightfully situated. The hills behind it are beautifully picturesque and well cultivated. The houses are mostly of white stone, and present a pleasing aspect. The most regular are those of the Marina.

Of the people of Messina, the men are, in general, well made, but very swarthy. The females, while young, are pretty, and full grown at eighteen years of age. An Englishman should be careful, if occasionally disgusted by the habits of the vulgar, not to cavil or wrangle with them; as disputes are too frequently settled by the stiletta, durk, or knife, which they generally carry concealed, and handle dexterously.

The food of the inhabitants is mostly of fish, garlic, oil, and maccheroni. Little flesh is used. Their chief beverage is small wine. Many of the lowest class drink much of a sort of bad brandy, called *aquaduit*, and they smoke to excess. Some coal is found hereabout, but it is of so sulphureous a quality that it is little used. Charcoal and wood are very cheap.

Messina carries on a great trade in silks, oil, corn, wine, and fruit; but chiefly in foreign cottons. Provisions in any quantity may be purchased for the supply of a fleet, at reasonable prices; but fruit, vegetables, and other refreshments, are cheap.

Ships entering the port require no pilot, though many employ one, in order to have the assistance of their boats, for carrying a hawser to the shore or wharf, which is necessary on coming in, when the tide runs very strong. Most ships moor with a cable to the eastward, in about 20 fathoms, and a hawser fast to the shore, as there are stone posts for that purpose, at regular spaces on the wharf.

The best mode of anchoring in the harbour, as described by Captain Smyth, is to run close in, off the Marina, with a warp ready for a stern-fast, then drop anchor in about 30 fathoms, and secure to the shore immediately. A ship can moor, if she prefers it, in the central part of the harbour, with her best bower to the N.E. and the small one S.W., having an open hawse to the N.W., as heavy squalls rush down the hills in that quarter; but, as the western anchor, from the steep nature of the bottom, is liable to be brought home, and the ship would quickly tail, mooring thus is not so advisable as with fasts on the kay. To commanders of the Navy, who prefer lying at their own anchors, the following berth is recommended.

Best bower in 31 fathoms; small bower in 23 fathoms; ship in 35 fathoms, with the citadel flag-staff S. by E. $\frac{1}{2}$ E. [S.E. by S.]; Castel Gonzaga, (on the hill behind the town,) W. $\frac{1}{2}$ S. [W.S.W.]; Tower of Cœur de Lion, Mata Griffone, N.W. $\frac{3}{4}$ W. [W.N.W. $\frac{1}{2}$ W.]; Porta Reale Bastion, (without the harbour,) N.N.W. $\frac{3}{4}$ W. [N.W. $\frac{1}{2}$ W.]; the Lighthouse E.S.E. $\frac{1}{2}$ E. [E. $\frac{1}{4}$ N.]

It is to be noticed that, in the N.E. quarter of the harbour, between Fort Salvador and the Lazaretto, is a patch of ground made foul by the wrecks of two old Spanish line-of-battle ships, which were burnt and sunk here by order of Admiral Byng.*

For vessels intending to make but a short stay, there is a good berth, in which they may bring up, at two-thirds of a mile to the northward of the harbour, off the convent of *St. Francisco di Paolo*; it ensures an offing for standing either northward or southward; is well sheltered, and has excellent ground: but between it and Fort Salvador

* Captain Smyth incidentally remarks, that the *terredo navalis*, or ship-worm, commits great ravages in this port.

is a broken, foul bottom, in from 20 to 30 fathoms, which must be cautiously avoided, as very injurious to cables.

Water is obtained from a fountain on the wharf. Ships in quarantine get theirs from a well at the *Sanita*, which is to the northward of the town, or at the Lazaretto.*

CHARYBDIS.—The celebrated vortex, named the *Galofaro*, more known by the antient name *Charybdia*, is formed at the back of the *Braccio di St. Raniere*, or tongue of land forming the harbour of Messina. By the antients, this whirlpool was said to swallow up ships, and upon the return of the tide to throw them up again in broken pieces. Captain Smyth describes it as an agitated water, from 70 to 90 fathoms in depth, circling in quick eddies, which seem to be caused by the meeting of the harbour and lateral currents with the main current; the latter being forced over in this direction by the opposite point of *Pezzo*. The danger of Charybdia is proverbial, and at the present day small craft are, at times, endangered by it, and ships of war whirled round upon its surface; but, with caution, very little danger or inconvenience is to be apprehended from it.

This whirlpool appears, at about a cable's length from shore, in the middle of a bay formed by the Tangdora Points and Shoals. The last are two shelves stretching from the shore, about the Great and Little Lights, and having over them from 2 to 15 fathoms. Those leaving the harbour of Messina, and bound to the southward, must be cautious, that the strength of the current may not set them on the shoals, as the sand, being full of bituminous particles, is nearly as hard as rock, and if a vessel grounds here, the rapidity of the stream and great depth of water outside, are impediments to getting off again. To prevent such accidents, a *small light* has been established, under the recommendation of Captain Smyth, between the greater lighthouse and Fort Salvador, nearly on the meridian of the former; so that the high light, in a line with or open to the westward of the lower one, will always be a guide on approaching the harbour.

SCALETTA, &c.—In a healthy situation, at the distance of 10 miles S.W. $\frac{1}{2}$ S. [nearly S.S.W.] from Messina, are the towns of Scaletta, with about 700 inhabitants. To the southward of these a fine plain extends, from the declivity of the mountains to the beach. Here the citizens of Messina were accustomed to witness the celebrated Agonalian games. The country hence, towards Scaletta, is fine and fruitful, but the summits of the hills are destitute of wood. The coast presents a series of villages, gardens, and vineyards, whence Messina is supplied with vegetables, wine, oil, and fruit. The intervening towns flourish, from the good quality of their raw silk.

At Scaletta, the beach is broken by a rocky point, with an old watch-tower on it, and the place is fortified for the defence of the pass, this being the principal road to Messina from the stations along the eastern coast.

The shore southward of Messina is a steep sandy beach, having, within the distance of a cable's length, from 30 to 50 fathoms of water, and it has only three spots which afford temporary anchorage.

CAPE GROSSO, a bluff headland, with rocks at its base, lies at the distance of a league to the south-eastward of Scaletta. On the opposite coast of Calabria, $3\frac{1}{2}$ leagues distant, is *Cape del Armi*, distinguished by two turrets, and appearing directly under the hill of *Pentadattilo*. The latter is the antient *Pentedactylus*, and derives its name from its having five crags on an insulated base: it bears a great resemblance to a human hand, and has a castle half way up. The line between the Capes Grosso and Del Armi is considered as the end of the Faro Channel, but the influence of the current is felt considerably more to the southward. The antient town of ALI is situated just within Cape Grosso, on a declivity of *Mount Scuderi*; it is celebrated for its mineral-waters, and for the constant wind, blowing with some violence out of a cavern near its tabled summit.

* "I cannot too often describe the beauty of the country around Messina, which is never better enjoyed than from on board a man-of-war, at one mile from shore. To behold this city from the sea, its beautiful harbour, the winding Strait, extending for miles from the Faro to St. Placido; its several capes and promontories; the chains of mountains behind Messina, of most irregular forms; Forts Gonzaga and Castellaccio, with Antena Mara, (next in height to *Ætna*), crowning the whole: in short an assemblage of mountains, water, and orange groves, with a fine city, convents, and villages, all comprized in one view, that cannot be surpassed; but, as the sun declines and strikes on Calabria, new and rich tints, with different shades, appear. The wild sublimity of those mountains, the light which, at this time, displays the distant forests, with range beyond range of all forms and shapes, constitute a scene at once magnificent, beautiful, and sublime."—*Lieut. General Cockburn*, 1811.

POINT ST. ALESSIO is 8 miles to the S.W. $\frac{1}{2}$ W. [*S.W. by S.*] from Cape Grosso. This is an abrupt bold cliff, with several rocks under it, where coasting-craft occasionally anchor, although the water is shallow and the sea fetches in. The shore, between forms a steep bold beach, and presents several towns and villages, of which the first is that of the *Fiume di Nisi*, romantically situated under an antient castle. There are rich mines in the vicinity. Point St. Alessio has a tower, a barbican, and a telegraph-post: above it is the town of Forza, with a respectable castle, but frequently afflicted with mal'aria.

TAORMINA.—Cape St. Andrea, the antient promontory of *Taurus*, is 5 miles to the southward of Point St. Alessio. This cape forms the north side of the Bay of Taormina, as *Point Schisò* forms the south. Northward of Cape S. Andrea are several romantic little coves, with many curious rocks of coarse red marble, perforated with large caverns, the resort of innumerable wild pigeons.

The entrance of the Bay of Taormina is about half a league in breadth. The town [*antient Tauromenium*] appears over its north side, in the midst of romantic and matchless scenery; yet it is poor and dirty, with an immoderate proportion of convents and large buildings. It contains about 3,500 people, not in the best health. Above it, on the summit of the tabled cliff, is the wretched town of *Mola*, with about 400 inhabitants.

On the right or south bank of a rivulet, in the middle of the bay, is the unhealthy village *Giardini*, which has a better inn than the town above it. On the beach of *Giardini* is the statue of a bishop, and beyond this, with several turrets on it, is *Point Schisò*, with its ground of lava, &c. Here stood the antient city of *Naxos*, the earliest of the Grecian settlements, now overwhelmed with lava, gardens, and vineyards.

In the Bay of Taormina tolerable anchorage is afforded in from 8 to 30 fathoms, on a fine sandy bottom, near the shore, with mud farther out; but it is exposed to all easterly winds, excepting close up with either of the points, and therefore only to be taken in a case of necessity, when a central berth will be the best.

At half a league to the south-westward from Point Schisò, the river Alcantara [*ant. Onobala*] falls into the sea: this is one of the most considerable streams in Sicily. Between this river and *Point Alcorati*, a distance of 7 miles, is comprised the district of *Mascalì*, which is exuberantly fertile, and annually produces 90,000 pipes of wine. Near Alcorati are the flourishing villages of *Riposto* and *Giarre*: the ground here is unfit for anchorage. At two miles south-westward from Point Schisò is a loading-place, called *Casa Cottone*, where timber and grain are embarked.

POINT TOCCO and ACI REALE.—At 5 miles southward from Point Alcorati is *Point Tocco*, a precipitous mass of basaltic lava, converted into a mole, and forming a small port called the *Marina of Aci*. The town of *Aci Reale* is westward of this, and stands on extensive streams of lava, in a healthy and fertile situation. It is a clean and regular town, containing about 14,000 inhabitants, with many churches, &c.

CAPE MOLINO, another remarkable promontory of lava, is $2\frac{1}{2}$ miles to the southward of Point Tocco. Beyond the cape, on the S.W., is the little Bay of *Trezza*, on the north side of which is the unhealthy village of *Sta. Anna*, and more to the southward the loading-place of *La Trezza*, a small town built entirely of lava, the very dark hue of which, contrasted with the white-washed lintels and door-posts of the houses, has a singular appearance. It contains about 800 inhabitants. On the south side of the bay are the remarkable rocks called the *Cyclops*, which have a bold and singular appearance. The basalts that form them are mostly vertical, and consist of prisms, of from four to eight sides. The bay affords tolerable anchorage, in from 12 to 7 fathoms, fine black sandy bottom, except near the rocks and off Trezza, where there are some foul patches.

CATANIA.—From Point Molino to *Point Armisi*, the outer point of the Bay of Catania, the distance is $5\frac{1}{2}$ miles S.W. by W. $\frac{1}{2}$ W. [*S.W.*] At about a mile and a half south-westward of the Cyclops, is the little town of *Aci Castello*, with its castle, on an enormous cliff of lava, rising vertically from the sea, and containing about 700 inhabitants. This place, though very finely situated, is irregular and dirty.

From *Aci Castello* to *L'Ognaro*, a distance of more than half a league, the coast is black, rocky, and indented with numerous caverns. *L'Ognaro* is seated on a cove, from which a great quantity of squared lava is annually exported for building and paving; all the coast hereabout being bounded by the dreary lavas of *Ætna*. The general depth in the cove is from 7 to 3 fathoms, but the bottom, in patches, is foul, and requires chain-cables.

CATANIA,

CATANIA, the antient *Catana*, a colony of Greeks, is at present the second city of Sicily, and its polished and literary societies render it highly respectable. This place has been dreadfully ravaged, at different times, by wars, earthquakes, and volcanic eruptions. Many vestiges prove it to have been antiently very elegant and extensive.

The city has a noble appearance from sea, which is not diminished on landing. Its streets are regular, spacious, and handsome. Its numerous churches and public buildings are magnificent: they are mostly constructed of lava, faced with magnesian limestone, and enriched with marble.

The memorable earthquake of 1693, in which 50,000 inhabitants perished, so nearly destroyed the whole of the city, that the little remaining was taken down, in order to carry the new plans into effect, so as to have wide streets and numerous squares, as best adapted for a place subject to such awful convulsions of nature.

As is London, to the great fire of 1666, so is Catania, chiefly indebted to the calamities to which it was exposed during the successive eruptions of Mount *Ætna* towards the close of the 17th century, for the style of elegance displayed in its buildings and public edifices. Its straight and wide streets, which lie in right angles, are, as well as the avenues leading to the city, curiously paved in squares. This city is the residence of many of the Sicilian aristocracy. Its present population amounts to 74,000. All ranks have, in general, a better and more cheerful appearance than in the other Sicilian cities: their domestic and social intercourse is less corrupted, and their easy manners are extremely pleasing to strangers. The charitable institutions are numerous and respectable. Of the principal buildings the cathedral is highly attractive. The marketplace is a handsome octangle, ornamented with a covered portico and marble columns. The university is an extensive foundation, and is well supported. The environs of the city, excepting those parts overrun by lava, are fertile and well cultivated, but have a black and repulsive appearance.

The port of Catania is generally filled with small craft, which come hither for corn, maccaroni, potatoes, olives, figs, silk, wine, almonds, cheese, oil, soda, manna, cantharides, amber, snow, and lava: its commerce merits a superior harbour. Point Armisi forms the north side of the port, and between it and the *Sciarra* Point, on the south side of the town, all vessels may bring up, on occasion, in from 7 to 12 fathoms, watching the wind; but the bottom is rocky. The small or inner port is formed by a stream of lava to the south, and two short piers to the north: its greatest depth is $3\frac{1}{2}$ fathoms; and this does not extend far.*

THE GREAT BAY, or GULF OF CATANIA, extends from La Trezza to Cape Santa Croce, a distance of $7\frac{1}{2}$ miles. Its ground is generally clean, and ships may anchor in any part during the fine season, by picking out a berth with the lead. The central part of this bay is formed by the sandy beach of the extensive plain to the southward of Catania, which extends nearly 10 miles, and which is bisected by the *River Giaffretta*, the antient *Simaethus*, one of the largest in Sicily.

MOUNT ÆTNA.—The coast which we have latterly described may be considered as the eastern terminating line of Mount *Ætna*, of which the extensive base is 87 miles in circumference, and its summit, as already noticed, 10,874 feet above the level of the sea. This summit is $14\frac{1}{2}$ miles northward from Catania, and its situation is, latitude $37^{\circ} 43' 31''$, longitude $15^{\circ} 0'$. The radius of vision is about 150 miles, and the angle of inclination of the visible horizon with the true $1^{\circ} 43' 6''$. The mountain is divided by nature into three distinct parts, or zones: the fertile, the woody, and the desert; each materially differing from the other in aspect, climate, and produce, as may be inferred from these distinctions. The first region is well cultivated and thickly inhabited: the woody region is an extensive forest, six or seven miles in breadth, which affords abundant pasture to numerous flocks and herds: the desert region is a melancholy waste of black lava, scoria, and ashes, in the centre of which is the crater. Captain Smyth thinks that this volcano was more intense and active, in antient times,

* General Cockburn has said that, the beautiful situation of Catania exceeds description: a fine well-built city, close on the sea-shore, overshadowed by the gigantic majesty of *Ætna*, and encompassed by the several minor volcanic hills, which appear like so many branches arising from the parent stock,—the placid brilliancy of the sea-view in front,—and the solemnity of the inland scenery behind,—contributing to form as magnificent a prospect as any part of the island can exhibit.

than

than it has been in more recent periods; the matter being not only more abundant, but pumices and vitrifications were numerous; whereas, latterly, no such substances have been ejected.

AGNUNI, &c.—At the south end of the Plain of Catania, and at 10 miles to the southward of the city, is the *caricatore*, or loading-place, of *Agnuni*, a village whence corn, oil, and rice, are exported. The air is here unwholesome, during great part of the year. On the side of one of the hills, at the back of Agnuni, distant a league and a half, stands *Lentini*, the antient *Leontium*, once a celebrated and populous city, which was totally ruined by the earthquake of 1693, but it again contains about 5000 people, who subsist by the sale of oil and other products of the country.

LA BRUCA.—At 4 miles S.E. $\frac{1}{2}$ E. [*E.S.E. $\frac{1}{2}$ E.*] from Agnuni is the little port of *La Bruca*, containing a small village on a tongue of rock, with about 160 poor inhabitants. It has a stout square castle, with round towers at its extremity. The harbour appears like a work of art, rather than of nature, as the rocks here rise vertically 40 or 50 feet, and contain several grottos. Small craft resort hither for wheat, tunny, and squared stones for building, and fine oysters are taken here. Regular soundings may be found on approaching, and near the castle are $2\frac{1}{2}$ fathoms. The steepest shore is on the west. At a mile eastward from the port is the headland named *Point Cornala*. From the latter to *Cape Santa Croce*, the bearing and distance are S. by E. [*S.S.E. $\frac{1}{2}$ E.*], 3 miles. The cape is pretty bold, but has a few rocks and a tailing reef without it. Upon it is the small convent of St. Helena. The promontory of Santa Croce terminates at *Point Grosso Longa*, which is at three-quarters of a mile southward of the cape, as above stated.

AUGUSTA.—The city of *Augusta* stands on a small peninsula half a league to the westward of Point Grosso Longa; the coast between forming a bay called *Porto Safonica*, of which the inner part is shoal and rocky. At one-third of a mile from the south end of the peninsula is the *Torre d'Avola*, a well-built insulated fort, on which is a lighthouse, in which a miserable light is exhibited. The shoal ground extends three-quarters of a mile to the southward of this tower, and thence borders all the bay to the isle *Magnisi*, by which it is terminated on the south. The *Hybla Shoal* lies nearly in the middle of the entrance, at one mile and a quarter to the northward of Magnisi: this is a dangerous reef of hard rock, with from $3\frac{1}{2}$ to 5 fathoms over it, and having near it a depth of 8 to 10 fathoms, gravel bottom.

The town of *Augusta* is large, strong, and well fortified; the streets regular and parallel; but the houses are low and mean, and the inhabitants, amounting to nearly 8000, have an air of dejection and poverty. They subsist by the export of salt, made in salines north and west of the town, and of a little oil and wine. With their poverty they seem to unite a degree of ferocity, which degrades them below the general rank of Sicilians.

The principal fortress is situated on the isthmus that unites the town with the main, both of which it commands. The town is surrounded, towards the sea, by a glacis or covert-way, in front of which is an artificial cordon of rocks, in the water, to prevent the approach of boats.

The mole and the pratique-office are between the town and citadel. The landing-place for boats is under the line-wall, near the middle of the cordon, or rocks, above-mentioned.

The western sides of the harbour and bay are watered by several streams, in which fine eels, mullet, and barbel are caught. On this side are the ruins of the antient *Hybla-Galeota*, *Hybla-Magara*, &c. On the range of hills which bound the plain on the west, the inhabitants still collect excellent honey, with which they carry on a profitable traffic. The promontory of Magnisi, [ant. *Thapsus*], on the south, is connected to the main by a sandy isthmus, or causey, and is of moderate height. At the inner end of the causey are the extensive salt-works of *Sajona* and the plain of *Aguglia*. On Magnisi, opposite to the causey, is a martello-tower, which completely commands the island. This isle forms two small bays, having sandy bottom, with good anchorage for coasters, in from 4 to 9 fathoms.

Ships standing in for Augusta may pass the promontory of Santa Croce, at a convenient distance, only observing to clear some rocks which lie at the foot of Point Grosso Longa; thence steer about S.W. by S. until nearly three-quarters of a mile to the southward

ward of the lighthouse, and never shoalen to less than 12 fathoms in that distance. When the lighthouse and the cathedral, (the highest edifice in the town,) are in one, you may gradually haul up to the N.W. and North, passing the light at about half a mile, and take up a berth abreast of the town, in from 8 to 11 fathoms, clay bottom. You may run further up, beyond the forts, and anchor in from 6 to 8 fathoms, but the air is not so wholesome as at the lower anchorage.

Captain Smyth gives the following bearings for mooring in, with the anchors true North and South, in 10 fathoms, stiff clay, near half a mile from the town. The citadel N.N.E. $\frac{1}{2}$ E. [*N.E.*]: the Lighthouse S.E. $\frac{1}{2}$ S. [*S. E. by E.*]: Magnisi tower S. $\frac{1}{2}$ E. [*S.S.E.*]: Vittoria fort N. by W. $\frac{1}{2}$ W. [*N.W. by N.*]

On coming in, care must be taken not to run on the Hybla shoal, which lies as above described, with the lighthouse a little open to the eastward of the cathedral. Large ships to avoid it, on coming from the southward, should keep towards Cape Sta. Croce until the lighthouse bears N.W. $\frac{3}{4}$ N. [*N.W. by W.*] about two miles, and then stand in towards the anchorage: or, they may enter by the S.W. channel, between the reef and Magnisi; giving the latter a berth of three-quarters of a mile, and borrowing over towards the main until the cathedral is well open to the westward of the lighthouse; for, by keeping it open thus there is plenty of room to beat.

With easterly and southerly gales, there is often a great swell in the bay, which causes those lying farthest out to ride heavily. The ground is good, but it is requisite frequently to sight the anchor, which may otherwise require an immense purchase for weighing.

PANAGIA BAY.—From the S.E. point of Magnisi Cape Panagia bears S. by E. $\frac{1}{2}$ E. [*S.E. by S.*] 3 miles: the coast between forms the Bay of Panagia, the bottom of which is sandy. In its southern part is a rocky creek, with a large *tonnara*, or tunny fishery. From Cape Panagia to the entrance of the harbour of Syracuse the bearing is true South, distance, 4 miles. The coast between is composed of rocky cliffs, with numerous caves, and is generally bold-to: there are here, however, several remarkable rocks, of which the first is a perforated rock, near shore, at very nearly half-way between: and, at three-quarters of a mile to the southward of this is a cluster called the *Capuchins*. The last are nearly half a mile to the northward of Syracuse, and between them and the town is a small shallow bay, named *Porto Piccolo*; the antient *Porta Marmoreus*, in which the ground is rocky. More to the southward, off the middle of the town, at a cable's length, is *Lo Scoglio del Cane*, or the Dog's Rock, which is low, and has within it a passage of $3\frac{1}{2}$ fathoms.

SYRACUSE, [*SIRACUSA*.] the antient capital of Sicily, was founded by a colony from Corinth, and gradually increased until, at the acme of its prosperity, the circuit of its walls amounted to more than 20 miles, and the number of its inhabitants to more than half a million. It was of a triangular form, and consisted of four parts; *Ortygia*, or the islet called *Nasos*, which was all that the Greeks first occupied, after having expelled the Sicilians; *Acradina*, the handsomest, that faced the sea, northward of *Ortygia*; *Tycha* or *Tyché* connected to *Acradina* on the west; *Neapolis*, or the New City, on the south of *Tycha*. The modern city is wholly upon *Ortygia* or the island, connected to the main by a bridge, &c., and contains about 13,000 inhabitants. In the dreadful earthquake of the 11th January, 1693, one-fourth of the inhabitants perished under the ruins of their houses.

The interesting plan of the city and harbour of Syracuse, by Captain Smyth, is a real curiosity. It exhibits the site of the antient town; of the *Latomæ*, or *Prisons*, and the *Ear of Dionysius*; of the *Catacombs*, the *Theatre*, the *Aqueducts*, and other remarkable vestiges, of this renowned city. On the west side of the Bay is the *River Anapus*, on the southern bank of which was the suburb of *Olympium*, now distinguished by two broken columns, the only remains of the temple of *Jupiter Olympius*, and which serve as excellent beacons for entering the harbour. All these are copiously described in Captain Smyth's '*Memoir*.'

"When at anchor," says Capt. S., "in the noble harbour of Syracuse, the beauty of the surrounding country is peculiarly striking; as the town still possesses all the local advantages for which it was renowned in the days of its glory; and its climate is yet such as to justify the antient adage—that there never was a day in which the sun was not visible at some one hour. It is admirably adapted both for a naval station, and for a commercial emporium with the Adriatic, the Morea, the Levant, and Egypt; but a few *polacche*

polacche and *paranzelli* are the only vessels that repair thither, and the commerce consists in the export of a little salt, wine, oil, and fish; notwithstanding that the excellent bottom of this harbour, its easy access, good supply of water, and security, make it rival with any haven in Europe. Here Lord Nelson's fleet was supplied with bullocks, vegetables, and other refreshments, and was ready again for sea in five days, on his memorable pursuit of the French fleet in 1798."

The city constitutes a fortress of considerable strength, and the entrance of the harbour, which is half a mile broad, is commanded by a fort on the point south of the town, called *Maniace Castle*, on which is a lighthouse. The streets are confined and narrow, and the public buildings, though numerous, have nothing to recommend them to notice. The natives, in general, are kind and hospitable to strangers. The adjacent country, being copiously irrigated, and possessing a fine marly soil, is exuberantly fertile, producing wheat, oil, hemp, tobacco, fruit, pulse, and several kinds of delicious wines; but, from the marshes of the alluvial plains on the west, pernicious miasmæ have frequently arisen, and occasioned the destruction of besiegers. The Anapus is itself much contaminated, and its current impeded, by the injurious custom of steeping hemp in it during the summer.

The southern side of the harbour of Syracuse was the promontory of Plemmyrium, and some shoals which lie off its northern part are still called the *Plemmyrium Shoals*. These stretch about one-third over the entrance from the southward, and the least water on them, as stated by Capt. Smyth, is $3\frac{1}{4}$ fathoms, with 7 between them and the land.

When, on entering the harbour, the ship is just clear of the lighthouse, the two broken columns of Jupiter Olympus, on the west of the harbour, will be seen; with these two in one, bearing W. by N. $\frac{1}{4}$ N. you will pass close inside the point, and give the shoals a wide berth, in a channel of from 9 to 15 fathoms. If standing in at night, from the northward, when the light bears W. N.W. $\frac{1}{4}$ W. [*West a little southerly*] by keeping W. $\frac{1}{4}$ S. [*W. S.W.*] you gain a clear channel close to Maniace or the Light-house Point. If coming in from the southward, keep the light on the larboard bow, and when it bears to the westward of N. N.W. $\frac{1}{4}$ W. [*N.W.*] you may stand on safely. In either case, good anchorage may be found to the northward, abreast of the town; but, from the facility of getting out with light winds, the situation between the town and the salt-works, in from 5 to 9 fathoms, fine black mud, is to be preferred. The N.W. part of the harbour, owing to the floods of the Anapus and the marshes, is the shoalest.*

As the S.W. winds, which come over the Valley of the Maddalena, lying in that direction, are the most violent, while the East and S.E. send in the greatest swell, those who intend to make any stay in winter, should moor with the best bower to the S.W., the small one N.E. and an open hawse to the mouth of the harbour. Here, in $6\frac{1}{2}$ fathoms, clay, off shore nearly half a mile, the bearings are as follow:

The Cathedral † E.N.E. $\frac{1}{4}$ E. [*N.E. by E.*]: the Lighthouse S.E. rather easterly [*E.S.E. $\frac{1}{4}$ E.*]: Massa Point, the S.E. point of the harbour, S.S.E. $\frac{1}{4}$ E. [*S.E.*]: Columns of Jupiter Olympus W. by N. [*W. $\frac{1}{2}$ S.*]: Mouth of the Aqueduct, to the N.W. of the town, N. by E. $\frac{1}{4}$ E. [*N. $\frac{1}{4}$ W.*]

From the best anchorage generally, in the northern part of the harbour, the light-house point bears from S.E. to S.E. by S. and the city gates from E. by N. to E.N.E.; depth about 5 fathoms, soft muddy bottom. The tide here is generally imperceptible, but there is a little rise and fall occasioned by the winds.

Wood may be purchased cheaply, and water may be obtained at different places. The best is on the north side of the harbour, from a fine run brought down by the aqueduct. The casks may be filled in the boats with a long hose: In case of emergency, with a fleet, water may be obtained from the River Anapus, on the west side of the harbour; here the water may not be so pure, and it will be necessary either to raft the full casks off, or rig a triangle to hoist them into the boats, as the water is too shoal off the mouth of the river to get boats in close enough to fill the casks in them.

Fresh beef, vegetables, and Sicilian wines, may be had here at reasonable prices.

* At about 320 yards to the eastward of the landing-place and opposite the Marina, there may probably remain, in $2\frac{1}{2}$ fathoms, the hull of a vessel which sunk several years ago, and which became embedded there.

† Near the middle of the town; antient *Temple of Minerva*.

SYRACUSE to CAPE PASSARO.—The southern promontory of the land of Syracuse terminates to the southward by the cape called *Morro di Porco*, which is nearly a league from the entrance of the harbour. A vessel bound to the southward may sail close to the cliff of the cape, or within a cable's length in 15 or 20 fathoms: after which Cape Passaro, appearing like an island, will soon be seen.

At about 3 miles to the south-westward of *Morro di Porco* is the little port of *Lognini*, formed by a large rock connected to the main by a reef on the north shore. The coast between these places forms a fine bay, with sandy coves, where ships may be sheltered from W.N.W. by the North to E.N.E. (by compass) in 12 and 13 fathoms, sand and mud.

Finely situated on a woody eminence, 7 miles to the south-westward of *Lognini*, is the town of *AVOLA*, containing about 7000 inhabitants. It has a Marina, or dependent village on the beach, a tonnara, a battery, several respectable edifices, a good market-place, and an air of cleanliness and regularity. Besides the profits of the tonnara (fishery) *Avola* has a considerable traffic in wine, corn, cheese, carubbas, almonds, oil, honey, and fruit, and some in sugar, made from the only cane plantation now on the island. The adjacent country abounds with game, and supplies pasturage to a great number of fine cattle, many of which are exported to Malta. At between two and three miles south from the Marina are moored the nets for catching the tunnies, and here a vessel is generally at anchor, with a hut built on her as a beacon.

NOTO, the antient *Neetum*, a city of 13,000 inhabitants, stands 4 miles inland, south-westward, from *Avola*. It is charmingly situated, and is one of the most elegant and respectable towns in Sicily, but the air is very unhealthy. The River *Abyssos* (antient *Helorus*) winds through the plain below, and upon the surrounding lands luxuriantly abound the walnut, olive, almond, and fig trees, with vines, intermixed with myrtles, jessamines, roses, and numerous aromatic shrubs; but misery and disease are in attendance, and the few natives who dwell here are poor and feeble.

At 4 miles more to the southward is *VINDICARI*, a small port and caricatore, or loading place, near the sandy marshes of *Rovilta*. It is defended by a tower of four guns. Refreshments may be procured here, but not with facility. At $3\frac{1}{2}$ miles southward from this place is *MARZAMEMI*, a small and dirty fishing village, inhabited by an industrious people, who possess one of the most profitable tonnaras in Sicily. The coast from *Marzamemi* to the southward, presents a barren desolate appearance, and seems to be nearly deserted: but on a hill to the south-westward of it is the new town of *PACHINO*, with its church and windmill, which are very conspicuous from a considerable distance.

At a league and a half to the southward from *Marzamemi* is the island of *PASSARO*, bearing an arid and deserted appearance, but where there is another large tonnara, employing about 300 people. The isle is composed of a singular accumulation of marble, lava, tufa, cinders, and oceanic deposits; it is high on all sides but the west, where it is connected to the main by a sandy spit, having over it two feet of water. On the eastern point is a tower redoubt for twelve guns, garrisoned by seventy-five soldiers.

Between *Avola* and *Passaro* the coast affords good shelter, both to ships and small craft that are obliged to bear up in the channel of Malta, from a westerly gale; the berth may be taken by the lead, in from 9 to 30 fathoms, sand in shore, and stiff clay in the offing. Caution must be taken when rounding the point under the tower of *Passaro*, in order to keep clear of the tunny nets, which are moored thence to the tonnara, in the fishing season.

The redoubt on the Isle *Passaro*, the limit of the eastern coast of Sicily, is placed by Captain Smyth in latitude $36^{\circ} 41' 30''$, and longitude $15^{\circ} 8' 56''$.

Half a league south-westward of *Passaro* Isle is a low rocky point, forming the east side of a cove called *Porto Paolo*; this is *Cape Passaro*, the antient *Pachynus*. At a short distance inland is a little village newly settled, for the improvement of the adjacent plains. The coast hereabout has otherwise a desolate and melancholy appearance.

Having now described the northern and eastern coasts, we begin again with the N.W. and proceed thence, southward and eastward, from Cape St. Vito, with which the preceding description commenced.

THE ÆGADEAN ISLANDS, &c. OFF THE WESTERN COAST, WITH PANTELLARIA.

It was not until after the publication of the Surveys of Captain Smyth that we knew of any fair representation either of the *Ægæan* or of the *Æolian Islands*; and, upon reference to any former maps or charts, it will be seen, on comparison, how very erroneously all these isles were represented, as well as the neighbouring coasts. Moreover, the great Bank, between Sicily and Africa, with the soundings on and about the same, were totally unknown, with the exception only of the *Sherki Rocks* and *Keith's Reef*, which will be described with the African coast hereafter. For the great Bank, (lately distinguished by the name of Captain Smyth's ship, the *Adventure*,) the reader is referred to the chart. The islands we shall now take in geographic order, commencing with *Maritimo*, as the most convenient arrangement for British commanders, bound to the eastward.

THE ÆGADEAN ISLES, or ÆGADES of the antients, consist of *Maritimo*, *Favignana*, *Levanzo*, and *Formiche*. Of these the westernmost is *Maritimo*, well known as an important landfall and point of departure, and the centre of which is now proved to be in latitude $38^{\circ} 0' 15''$, and longitude $12^{\circ} 2'$.

MARITIMO, the antient *Hiera*, is situated at the distance of 7 leagues from the nearest land of Sicily, which is that near the city of *Trapani*. The island is high and about 7 miles in circuit; its west side is inaccessibly rugged and steep, but the east coast is lower, and has a small straggling village, with fifty or sixty people, who cultivate the arable part, collect a quantity of fine honey, and export fagots to *Trapani*. Near the village, which is named *San Simone*, there is good landing in westerly winds, and excellent fresh water may be obtained here; but the fishermen take shelter in a small cove, *Cala Bianca*, under the N.W. point of the isle, and in which there are 6 fathoms of water.

Off the N.E. end is a high steep rock, connected to the island by an isthmus, and on its summit is a castle, which defends the anchorage beneath. This castle is garrisoned by about forty invalids, and is often used as a state prison; it is also the residence of a Sicilian Colonel, who is governor of the island.

Ships from the westward, and bound to Palermo, after making *Maritimo*, should keep Cape St. Vito on the larboard bow: for, as this land is high and conical (*see page 145*) it cannot be mistaken. They will thus clear the island *Levanzo*, the rocks called the *Porcelli*, and *Cofano Bay*, all of which lie to the southward of this route. This is especially to be observed with a northerly wind and carrying current.

If bound to *Trapani*, having made *Maritimo*, stand close by the north point of the isle *Levanzo*, which is perfectly bold, and thence steer nearly S.E. by E. (*E.S.E. $\frac{1}{4}$ E.*) 7 miles, to *Colombara lighthouse*, which distinguishes the western side of the port. You will thus pass over a foul patch, lying nearly in the midway, and over which the least depth is $5\frac{1}{2}$ fathoms.

FAVIGNANA, the antient *Ægusa*, lies at the distance of 10 miles from *Maritimo*, and the bearing of its north point from the castle of *Maritimo* is S.E. by E. $\frac{1}{4}$ E. [*E. by S.*] The island, which is very irregularly formed, is 14 miles in circuit, and the greater part is low, but a remarkable mountain extends through its central part from north to south. The population is estimated at 2,300, exclusive of the garrison, and from 300 to 400 convicts.

At half a league South (by compass) from *Point Faraglione*, the north point, is the port, a fine cove, having on its eastern side the town of *San Leonardo*, and gardens yielding peaches, pomegranates, grapes, and vegetables. The chief defence of the island is the Castle of St. Catharine, which stands on the summit of the high land, and is considered impregnable. On its keep is a telegraph, in communication with one on *Maritimo*. There is a smaller fort, *San Giacomo*, on a hillock S.E. of the port, in which are confined a gang of the vilest criminals of Sicily. At the entrance, on the eastern side, is another, *San Leonardo*.

Favignana derives a considerable revenue from its tunny and anchovy fisheries, its quarries of stone, and the sale of sheep, goats, and poultry. The island abounds with game,

game, and is actually infested with hares and rabbits. Fish, also, is most abundant. The depths in the port, which is open to the north, shoalen from 6 to 4, 3, and 2, fathoms.

At the N.E. end of Favignana is a cove, the *Cala Rossa*, in which there are good berths in from 20 to 7 fathoms, where a moderate supply of vegetables, fruit, and water, may be obtained, and advantage of any wind, for coming or going, may be taken. To the southward of Favignana, at the distance of from $1\frac{1}{2}$ to 4 miles, are two distinct banks, called the *Banks of St. Catharine*, divided by a deep channel of one mile. The least water on the southern one is 17 fathoms, but on the northern only $3\frac{1}{2}$, rocky ground, and this near its northern edge, with St. Catharine's Castle on Favignana bearing N.N.E. [*N. $\frac{1}{2}$ E.*]

LEVANSO lies at the distance of 4 miles to the N.N.E. of Favignana. This island, the ancient *Phorbantia* or *Bucinna*, is about six miles in circuit, high, rugged, and inaccessible, two or three spots excepted, and very thinly inhabited. It produces a little grain and fruit, with some sheep and goats: but the chief produce is fagots from the stunted woods, which are sent over to Sicily. On the south side of the isle are some rocks, called the *Sugar-loaves*, near which, and all round the coast, is excellent fishing.

The FORMICHE or ANTS, are two low barren islets, at the distance of nearly a league eastward from the S.E. point of Levanso, and separated by a channel of half a mile. The western is the smallest, and a desert. The largest, nearly square, and half a mile broad, is covered with large stone buildings, consisting of the storehouses belonging to a tonnara, a tower with bastions, a chapel, and a village inhabited by the fishermen, having a fine capacious cistern for water. On the S.E. is a little port, in which a few small vessels may lie securely.

At one-fifth of a mile from the south side of the eastern Formiche is a shoal spot of 3 fathoms: and, to the eastward [*E.N.E.*] of the castle, about half a mile, is a rocky shoal, having over it but little more than two fathoms. The channel between the Formiche may be taken in fine weather, but it is better to avoid it, as there is a shoal of $2\frac{1}{2}$ fathoms nearly in mid-channel. The western side has 7 and 8 fathoms.

ANCHORAGE.—In a central situation between Favignana, the Formiche, and Levanso, is an eligible rendezvous for a fleet, with excellent anchorage, in 21 fathoms, mud, just off the gravelly bottom, with the greater isle of the Formiche E.N.E.; the north point of Levanso N. $\frac{1}{2}$ W.; and St. Catharine's Castle, in Favignana, nearly W. by S.

PORCELLI or PIG ROCKS.—The *Porcelli* or *Pigs*, a dangerous reef, on a wash with the water, lie at the distance of 4 miles E. $\frac{1}{2}$ S. [*E.N.E. $\frac{3}{4}$ E.*] from Point Grosso, the north point of Levanso. The reef is steep on all sides; there being 17, 12, and 8, fathoms, and all at once scarcely a foot, and many of the summits above water, but generally surrounded by breakers. Between the outer pinnacle, on the north, and the main body of the shoal is a swash of 6 or 7 fathoms, in which a boat may moor, in fine weather, for fishing. The reef lies with Colombara light-tower (near Trapani) nearly S.S.E., and Formiche tower S.S.W. $\frac{1}{4}$ W.

PANTELLARIA, the ancient Cossyra, lies nearly on the meridian of Martimo, at the distance of 72 miles, its centre being in latitude $36^{\circ} 48'$, and longitude $11^{\circ} 58'$. This island, a dependency of Sicily, is about 30 miles in circumference, entirely volcanic, its features being the vestiges of craters, with prodigious quantities of lava, pumice, scoria, and pozzolana, hot springs, vapour-stoves, and grottoes formed by corrosion. The interior is divided into broken hills, covered with brush-wood, and ravines, and valleys, moderately cultivated with olives, figs, vines, cotton, and vegetables. A considerable quantity of orchilla, for dyeing, is also collected here. The fruits are fine; raisins especially, which are considered as included with the best and cheapest in the Mediterranean Sea. For three-fourths of the corn required for the island they depend on Sicily. The population is estimated at 4,600, among whom are some criminals, &c. The language and dress of the inhabitants are a mixture of Italian and Arabic.

The island is so high that, in moderately clear weather, it may be seen from the deck of a frigate at the distance of 15 leagues. Its summit is near the centre of the island, and it appears sloping downward to each end; but the east end is much higher than the west.

The highest mountain is clothed, on its southern side, with a wood of fine trees, chiefly of chesnut and oak, and lower down the olive flourishes luxuriantly. Within the summit

mit is a great natural curiosity, the remains of a crater, converted into a lake of unfathomable water; this lake was visited by two British officers, in 1817, who describe it as about four miles inland, the way to it being over a very rugged narrow road, ascending nearly all the way to the summit, and thence downward, by perpendicular cliffs, of 80 or 100 feet, to the lake.

The lake is inclosed by a wall of stone. On the declivity upon one side, opposite to the point of ascent, is some finely cultivated land, with buildings on the ridges, and farm-houses: beneath this is a tract of fine dark soil, regularly walled in, and having at the north end a pool, about 6 feet round, the water of which boils, and has a sulphureous brackish taste. On the opposite side are some cotton fields. At the east end is a road and stone wall to the house of the hospitable Sen. *Boeanagra*, whose extensive plantation is on the border of the lake. From this place, when prepared, figs, grapes, currants, &c. are sent to the market.

The ridge of high land around the lake forms a complete amphitheatre, and the top of it commands a delightful view of the lake and cultivated valley; also of the sea and hills around.

The town and castle of *Pantellaria* are at the head of a cove, conveniently situated on the N.W. side of the island, but open to a grown swell. The town is a large but poor place, of a miserable aspect, and loaded (not decorated) with a huge church, several chapels, and a capuchin establishment. The harbour is convenient for the small vessels of the place, which are employed chiefly in the exportation of wine, oil, cotton, orchilla, raisins, and a little alum. Water and refreshments may be obtained here, but not in great plenty. From the harbour, eastward, the shore is sterile and rocky. The north coast is terminated by two coves, *Cala Tramontana* and *Cala Levante*, both exceedingly picturesque, and separated by an isthmus-point, off which lies, as is common in the *Æolian Islands*, a high rocky islet, with a deep channel between. The east and south coasts consist of steep and inaccessible cliffs, with basaltic coves at the base, much frequented by wild pigeons.

Large ships may anchor off the harbour, by bringing the castle to bear S.S.E. $\frac{1}{2}$ E. [S.E.] two miles distant, where there is a depth of 18 fathoms, with sandy ground. Within this station the ground is rocky and foul, and a chain cable should be used. In the middle of the cove are numerous rocks above water, between which and a point of land, that projects from the east side of the harbour, the passage in is only 50 fathoms wide and $2\frac{1}{2}$ deep. Within this the country craft are moored. The landing place is at a small pier under a chapel standing near the castle-wall, to the eastward. The place to send for pratique is in a cove of St. Leonardo, the north point of the harbour, whither the officers of the health-office repair to meet the boat.

There are several landing places on the western shore of *Pantellaria*, but the ground, on approaching, is nearly the same as on the other coasts, and may be indicated by the lead. It is only to be observed, that there is a rock, of 5 fathoms, at about a mile and a quarter to the south-westward of *Point Nica*, the S.W. point of the island.*

WESTERN COAST OF SICILY FROM CAPE ST. VITO TO CAPE GRANITOLA.

CAPE ST. VITO, the usual landfall for vessels bound to Palermo, &c. has already been described on page 145. From the N.W. extremity of Cape St. Vito the outer extremity of *Cape Cofano* bears nearly S.W. [S.S.W. $\frac{3}{4}$ W.] distant 5 miles. Cape Cofano is the extremity of a rugged conical mount, carrying 10 fathoms close under it, and having a stout tower of defence upon it. On the north side is a large farm and a tonnara (tunny fishery), for the boats of which there is secure anchorage under an islet named *Vermia*.

The space between the Capes of St. Vito and Cofano is called the *Bay of Calazzi*, and it affords shelter in south-easterly gales, its bottom being deep and clean: the beach

* The volcano which existed, in 1831, between the north end of *Pantellia* and *Cape Bianco*, in Sicily, is noticed hereafter.

has excellent landing to the *Tower of Lucchesi*, which stands in lat. $30^{\circ} 10' 30''$, and long. $12^{\circ} 46'$.

At 5 miles W. by S. from Cape Cofano is *Point Emilia*, a low tongue of land, with a small sugar-loaf peak on it, over which, to the southward, is the high *Mount of St. Julian*, [San Giuliano,] and westward of it, at two miles, is a large barren rock or islet, called the *Asinello*. The *Emilia Shoal*, a steep reef, lies at a mile N.N.E. from the point: the depth over it is 2 fathoms, with from 6 to 10 immediately around it. In the middle of the channel between Point Emilia and the Asinello there is a depth of 16 fathoms.

MONTE DI SAN GIULIANO, or MOUNT ST. JULIAN, is the antient *Mont Eryx*, on which, at an elevation of 2175 feet, once stood the famous temple of *Venus Erycina*, one of the most magnificent and the most sensual of all the heathen establishments. Of this temple few vestiges now remain, and Eryx is, at present, an abrupt and sterile mountain, still resorted to by wild pigeons.

On the very summit of the mount is the town of *San Giuliano*, or *St. Julian*, or *Old Trapani*, on the site of the antient *Eryx*, with about 8,000 indolent and poor inhabitants: it is surrounded by a dilapidated wall with square turrets, has a high tower to the west, and a Saracenic castle, with battlements, on its eastern angle. To the S.W. of the town is a spring of pure water, which supplies a fine aqueduct conveying it into Trapani.

Between Point Emilia and *Sigia Point*, the outer point of Trapani, the bearing and distance are W. by S. [S.W. by W. $\frac{1}{2}$ W.] 5 miles. To more than two miles of this distance the shore is rocky and broken: at half a mile farther southward, amongst trees, is the small village of *Casimani*, and beyond this, at about a mile towards Trapani, is the Point, Tower, and Tonnara, of St. Julian. In the first part, or two miles, of this distance the ground is foul, to nearly half a mile out: but, from Casimani to St. Julian's Point, and from that point to Trapani, are fine sandy beaches. There are rocks about the point, and there the ground is foul.

TRAPANI.—The city of TRAPANI is $3\frac{1}{2}$ miles to the westward of the town of St. Julian. This is a fortified city, on a low tongue of land, occupying the site of the antient *Drepanum*, and entirely surrounded by a wall, with bastions, ravelins, &c. It contains about 25,000 inhabitants, generally industrious and enterprising, among whom are included the best artists, artificers, and sailors, &c. in Sicily. The town is commodious; the streets regular; the cathedral and senatorial palaces fine edifices; there are many convents, and nearly forty churches; besides which, are two hospitals, and other public institutions.

The N.W. extremity of the land is *Sigia Point*, with its tower, about which the ground is shoal and broken into several islets, &c., of which the southernmost is the *Colombara*, having on its inner end the lighthouse, already mentioned. Between *Sigia Point* and the city is a fine promenade. The Marina, a good walk under the line-wall, is ornamented with statues of Victor Amadeus and Philip V., and finished with a mole, on which stands the pratique-office. The harbour, which is on the south side of the city, is small and shoal. Off *Sigia Tower*, to the West, are several abrupt rocks, called *I Scogli di Mal Consiglio*, (Rocks of Bad Counsel): these are low, cragged, and exposed. The entrance of the harbour is protected by *Sigia Tower*, the fire of which, at a little distance, is crossed by the lighthouse-battery on *Colombara*, which faces the south.

Those from the eastward, bound to Trapani, after rounding Cape St. Vito, will see the town of St. Julian on the summit of the mountain, and may then stand close in with the coast until past Cape Cofano, whence an offing must be made, in order to clear the *Emilia Shoal*, which extends a mile from shore: or, with a leading wind, a ship may shape a course, in the day-time, direct from Cape St. Vito to the island *Levanzo*, until the islet *Asinello* is abaft the beam, and then stand on, through the channel, between the *Porcelli* and *Mal Consiglio* Rocks, for the anchorage.

Vessels of from 200 to 300 tons may lie at the kay, just above the pratique-office, where it is usual to have a fast under the walls, and an anchor laid out on the mud-shoals. Ships of greater draught bring up near the *Colombara*, in from 8 to 10 fathoms, muddy bottom, but uneven and patchy. The people of the country carry fasts to the shore, but Captain Smyth prefers mooring with the anchors S.S.E. and N.N.W. The ground over all this part is very much broken, and occasions strong counter-tides in fresh breezes; though they are never so strong but that a ship may beat against them.

The

The *INNER CHANNEL*, eastward of the *Porcelli*, is perfectly safe with a leading wind, but a sudden shift and set of the current may bewilder a stranger, and the quarantine regulations often impede the advantage of having a pilot. If proceeding this way, on making Trapani, at a distance, the tops of the houses will look like several sail, while Mount St. Julian will be clearly recognized by the town on its summit. In running on, you must carefully avoid the dangerous reef, called the *Porcelli*, (See page 163); and, on passing the islet *Asinello*, which may be seen to the eastward, bring the Tower of the *Formiche* to bear S.W. by W. $\frac{1}{2}$ W. Having thus passed the *Porcelli* well to the eastward, in order to arrive at the anchorage of Trapani, the *Mal Consiglio* Rocks and *Sigia Point* may be rounded by keeping them at a short mile distant, and you thus avoid the *Bullata*, a small ledge, of 9 feet of water, which lies on the edge of the shoal ground. The rock of *Colombara* may be approached to three-quarters of a cable, until opposite the lighthouse, where large ships find the best anchorage by bringing it to bear nearly N. by E. [*N. $\frac{1}{2}$ W.*] Smaller vessels may lie as above described.

But a plain clear channel for Trapani is to be found by running from the northward for the island *Levanzo*, guarding against the *Porcelli*, which lie 4 miles more to the eastward, and passing the eastern side of *Levanzo*, at about a mile off, then shaping a course for *Cala Rossa*, or the N.W. coast of *Favignana*, whence you proceed E. by N. for Trapani, leaving the *Formiche* on the left or larboard side.

In the night, or in thick weather, the passage between *Maritimo* and *Levanzo* should be preferred, as it is clear of all danger, although overfalls sometimes show on a rocky patch, of 7 or 8 fathoms, about 3 miles to the westward of *Levanzo Sugar-Loaf*. (See page 163.) But it must be recollected, that the east and west coasts of *Favignana* are low, and not easily seen in a dark night. The Banks of *St. Catharine*, to the southward of *Favignana*, have been noticed on page 163.

FROM TRAPANI SOUTHWARD, to *Cape Boëo* and the city of *Marsala*, a distance of 5 leagues, the coast is altogether low, irregular, broken, and variegated by numerous islets upon a base of shoal and rocky ground, which, in some parts, extends two miles from shore. Hence the clear channel, eastward of *Favignana*, is only half a league broad.

In the first half of the distance between Trapani and *Cape Boëo*, the beach is flanked by the towers of *Calcara*, *Nubia*, *Mezzo* or *Miagrano*, and *Theodore*, and the intervening country, to some distance, is laid out in extensive salt-works, by the construction of innumerable causeys, about a foot and a half high, inclosing square places, which communicate by dams with each other. Great part of the salt is sent to *Marseilles*, &c. The salt is heaped up in pyramids, ready for exportation; and, at the back of these heaps, which, at a distance, resemble tents, stands the little town of *Paceco*, a healthy spot, with about 2000 inhabitants. This town is at a league southward [*S.S.E.*] of Trapani, and is supposed to take its name from *Pacheco*, the heroic wife of the illustrious *Don Juan de Padilla*, who lost his life, in consequence of a struggle for freedom in Spain, 24th of April, 1521. The space between it and Mount St. Julian, antiently known as the *Field of Hercules*, produces sweet wine, corn, oil, and barilla.

Between *Theodore Tower* and *Cape Boëo* is the *Groupe of Stagnone*, a cluster of low isles, on the shoal ground already noticed. Of these isles the principal are, *Borrone*, *Favilla*, *Cernisi*, and *St. Pantaleo*. On the northern isle, *Borrone*, is the *Saline del Curto*, the produce of which is esteemed the finest in the neighbourhood. *Favilla* and *Cernisi* lie immediately to the southward; they are connected by salt-works, and defended by two towers. Phosphorescent medusæ and other molluscs are very abundant here in the autumn. Between these isles and the shore of Sicily is the isle *S. Pantaleo*, where stood the antient town of *Motya*, of which some vestiges still exist.

MARSALA.—CAPE BOËO, the westernmost point of Sicily, is $3\frac{1}{2}$ miles south-westward from the south end of *Cernisi*. The cape is low, and over it, in a healthy situation, is the city of *MARSALA*, the antient *Lylibæum*, once the capital of the *Carthaginians* in Sicily. This city is of a square form, surrounded by an old wall, on which there are houses, and is tolerably well built. It is bisected from N.W. to S.E. by a regular street called the *Cassaro*, on one side of which is the cathedral, a large edifice. The town, of course, contains convents, and other public buildings. The inhabitants amount to about 21,000, who trade in excellent wine, fruit, and barilla.

At a mile to the southward of the city is the *English Wine Establishment*, before which is a small mole, constructed by the merchant, Mr. Woodhouse. The ground here-

hereabout, and around Cape Boëo, is all shoal and foul, and large ships must lie to the S.W. of the city, in from 11 to 8 fathoms, at nearly two miles from shore, as the rocky bottom extends more than a mile from the land.

The country, for a few miles to the northward of Marsala, is called the *Terra Spagnola*, and presents a continuation of market-gardens and vineyards, shelving down from a gentle acclivity towards the smooth water inclosed by the Groupe of Stagnone.

Between Marsala and the outer point of Cape Boëo is the small chapel of St. John, in a circular form, and serving as a useful mark. At this place is a spring of fresh-water, to which peculiar qualities are attributed, especially on the festival of the Saint to whom it is dedicated.

A small port is formed between the beach near the English establishment, above-mentioned, and the reef which lies off shore. Between the mole and beach are from 7 to 14 feet, with stiff bottom; but, on the opposite side, the reefs, trending south-eastward from Cape Boëo, are, in many places, even with the water's edge. You may enter with the mole-head and English establishment E. $\frac{1}{2}$ N. until the chapel of St. John bears N. $\frac{1}{2}$ W., and drop an anchor, at a little more to the north, near the shore.

Vessels from Trapani, bound to the southward and eastward of Favignana, must first give the Formiche a berth, by keeping them about a mile to the westward, the lead carrying 10 and 12 fathoms: thence stand away towards Cala Rossa, at the N.E. end of Favignana, and pass its high eastern point, at the distance of half a mile. Thus you will clear the dangerous shoals of Borronne, extending from shore, and may steer to the southward as convenient.

MAZZARA, (Ant. *Mazarum*).—At 9 miles S. by E. [S.S.E. $\frac{1}{2}$ E.] from Cape Boëo is *Point Feto*. The coast between is altogether low, shoal, and rocky, and the people of it live mostly by fishing. At a league to the eastward of Point Feto is the city of *Mazzara*, with about 8000 inhabitants; and, at two leagues to the southward of Mazzara is the headland named **CAPE GRANITOLA**, which bounds the western and southern coasts of Sicily. Throughout this extent, and more especially around Cape Granitola, the coast continues rocky and shoal.

Mazzara, though small, has a respectable appearance from seaward, the domes rising above the houses; but, on entering, an unhappy contrast is presented, as the streets are narrow, unpaved, and dirty: yet it is a place of some traffic, making large exports of grain, pulse, cotton, wine, fruit, fish, barilla, madder-roots, oil, and soap, although it has no harbour. The town is surrounded by an old Saracenic wall, and has a ruinous castle at its S.W. angle. The public buildings are large and heavy, poor, and dirty; and it is said, that 'every house and hovel in Mazzara contains a priest and a pig.' A statue of St. Vitus, however, ornaments the entrance of the port.

The entrance of the River Salemi forms the little haven of Mazzara, and is convenient for small craft; but larger vessels are obliged to lie at a very exposed anchorage without, in from 8 to 12 fathoms. From 10 fathoms, clay bottom, about a mile and a half from shore, Point Feto bears N.N.W. $\frac{1}{2}$ W. [N.W.]; Mazzara citadel East [N.E. by E. $\frac{1}{2}$ E.]; and Cape Granitola S.S.E. [S.E. $\frac{1}{2}$ S.] It is not prudent to anchor nearer, on account of overfalls caused by fresh breezes, or by the *Marobia*, or *Mare Ubbriaco*, or *Drunken Sea*, which sometimes prevails here.

The **MAROBIA** is a singular phenomenon, an unaccountable movement of the water, occurring principally on the southern coast of Sicily, generally found to happen in calm weather, and considered as the certain precursor of a gale. It is generally felt with the greatest violence about Mazzara, owing, as Captain Smyth supposes, from the contour of the coast. "Its approach is announced by a stillness in the atmosphere and a lurid sky; when suddenly the water rises nearly two feet above its usual level, and rushes into the creeks with amazing rapidity; but, in a few minutes, recedes again, with equal velocity, disturbing the mud, tearing up the sea-weed, and occasioning a noisome effluvia: during its continuance the fish float quite helpless on the turbid surface, and are easily taken. These rapid changes generally continue from thirty minutes to upwards of two hours, and are succeeded by a breeze from the southward, which quickly increases to heavy gusts."

This phenomenon, Captain Smyth thinks, may be occasioned by a westerly wind blowing, at some distance in the offing, towards the north coast of Sicily, and a south-east wind, at the same time in the channel of Malta, the meeting of which would take place between

between Trapani and Cape S. Marco:* for it is to be noticed that the westerly wind most usually precedes, and the S.E. succeeds, the Marobia.

CAPE GRANITOLA.—From the beach of Mazzara the coast curves to the southward, 6 miles, to the point of Cape Granitola.—This cape is a long, low, and sandy projection, bordered by a dangerous reef, on which, from want of a lighthouse, many vessels have been lost. The land is flat, and cannot be seen, in thick weather, before a vessel is on the shoals, and the coast is the more dangerous as the currents here, depending on previous winds, are frequent and uncertain, more especially the Morabia, above described. The small white tower of Caldara, stands on the rising ground, at a mile and a quarter to the northward of the extremity of the Cape.

Captain Smyth says, that ships should never approach Cape Granitola nearer than two miles: but, should a vessel, by stress of weather, or otherwise, get on the shoals, he particularly cautions the crew against attempting to land, during a fresh breeze, near the point, it being shallow on its approach, and generally beat by a very heavy surf, with a strong re-surge. In such a case the boat should pull, at a prudent distance from shore, to *Trefontané*, (two miles eastward,) if the wind is from the westward; or to *Cala Dajolo*, (two miles northward) if the wind be from the eastward. From either of these places there is no difficulty in communicating with Mazzara.

THE SOUTHERN COAST OF SICILY, FROM CAPE GRANITOLA TO CAPE PASSARO.

THE SOUTHERN COAST OF SICILY, between the points above mentioned, is generally low and arid, and does not possess a single harbour for large ships, though there are several tolerable summer anchorages: of these the principal are those of *Sciacca*, *Siculiana*, *Girgenti*, *Alicata*, and *Port Paolo*: the secondary ones are Porto Palo, Palma, Port Nicolo, Terra-Novo, Scoglietti, Secca, Pozzallo, and La Marza, with several intermediate ones, of less importance.

The most remarkable headlands of the coast are, Cape San Marco, Cape Bianco, Point Tenda, Cape Scalambra, and Cape Passaro. Towards these the approaches are not so clean, nor so deep, as those of the northern and eastern shores. Captain Smyth's general rule for a stranger, working along the coast at night, is, not to stand inside of 17 to 20 fathoms: by day he may close to 12.

THE TIDES, or rather the CURRENTS, arising from the constant evaporation and the action of the winds, observe no regularity, rising a foot or two, according to the weather and the peculiarities of locality and depth: thus the N.W. wind, raking the shores, promotes a strong set to the S.E.; while the S.W. wind, which is very sensibly felt during the vernal equinox, causes strong counter-currents; and, at length, on a change of wind to the opposite quarter, the whole body of water rushes to the westward with considerable velocity.

In long settled weather, the currents between Sicily and the African shore, and even westward of Galita, or the meridian of 9 degrees, run to the eastward at the rate of from half a mile to one mile an hour. In the channel of Malta the current to the S.E. has, at times, been so strong that ships have found it difficult to beat up to Maritimo; while others, driven to leeward of Malta, have been obliged to carry a press of sail in order to hold their own, until a change of wind enabled them to make the island again. Another proof of the influence of this current is, that ships stretching over from Cape Passaro to Valetta, with a northerly wind, usually keep a point higher than their true course, to ensure reaching it.

CAPE GRANITOLA to CAPE SAN MARCO.—The long but slender bay between these points, which are 20 miles apart, is called the Gulf [Bay] of *Tre Fontané*. It has regular soundings, and the access is easy, but affords no good shelter, excepting for small craft, which may be found at Porto Palo, 13 miles from Cape Granitola.

Midway between Cape Granitola and Port Palo are the solitary ruins of *Selynus* or *Selinuntum*, standing on an elevated but lonely plain, between two small rivers, and ap-

* Cape San Marco is about 20 miles south-eastward [*E.S.E. ½ E.*] from Cape Granitola.

pearing, at no great distance, like a large city. These extraordinary vestiges of antient greatness, though only an incongruous mass of shafts of columns, metopæ, capitals, &c. excite admiration, and attest the mighty exertions, on this spot, of a once energetic people. Hereabout is a fishery of anchovies and sardinas. The country about Selinuntum is covered with dwarf palms, wild olives, and myrtles, abounds with game, and is almost uncultivated.

Cape San Marco is an abrupt forked point, of reddish colour, and a moderate height : it forms the western extreme of *Sciaccia Bay*, has a square tower with a battery on its summit, and at its base a shelf of rocks ; but it may be approached by the lead within a short distance.

SCIACCA, &c.—From *Cape S. Marco* to *Cape Bianco* the coast forms another long and slender bay. The bearing and distance from one point to the other are S.E. [*S.E. by E. $\frac{1}{4}$ E*] 14 miles. At a league to the eastward of *Cape S. Marco* is the town of *Sciacca*, containing 11,000 people, and one of the principal caricatori, or loading places, on the southern coast. Its exports are corn, fruit, anchovies, sulphur, and barilla.

This town stands on the site of the antient *Thermæ Selinunticæ*, or Baths of Selinuntum : it rises on an eminence from the sea, and is surrounded by an irregular wall, with a castle at its eastern angle, and a bastion or two towards the sea. Like some other towns on the coast, *Sciacca* appears respectable at a distance ; but, although it has large churches, convents, and magazines, it is a poor and wretched place. The country around is luxuriant and productive, and trade is sometimes brisk. The long-esteemed baths are supplied from two springs without the town to the eastward : the water issues from a white saline rock, in two distinct streams, one of which is sulphureous and hot, at about 126° of Fahrenheit, and the other cool, at about 59 $\frac{1}{2}$ °, impregnated with the saline quality of the rock. The celebrated Stufe, or Steam baths, of *Dædalus* are on the insulated hill, and have actually been in use upwards of 3000 years.*

Ships, in the summer, ride at about a mile off *Sciacca*, in from 7 to 12 fathoms, sand and clay, but they are exposed to every wind from S.E., by the South, to West, so that the anchorage can be used with safety during the fine months only ; but boats and flat-bottomed vessels may be hauled up on the beach. The best spot for anchoring is in 8 fathoms, mud, about a mile off shore, with *Cape S. Marco* N.W. by W. ; *Sciacca Castle* N. by E. $\frac{1}{2}$ E. ; a tower named *Christauro* (5 $\frac{1}{2}$ miles dist.) E. by S ; and *Cape Bianco* S.E. $\frac{1}{2}$ S.

CAPE BIANCO is a white promontory, about 90 feet high, with a shoal reef extending from it nearly a mile and a half to the southward : between it and *Sciacca* the country presents an extensive plain, watered by several rivers, in some of which is good fishing ; the grounds are excellently cultivated, and the coast protected by several towers, that of *Verdura*, exactly half-way between *Sciacca* and *Cape Bianco*, being the best. The land at the back of the plain is high and very rugged.†

SICULIANA.

* For Description, see Captain Smyth's "*Memoir*," page 218.

† *Volcano* of 1831, between *Cape Bianca* and *Pantellaria*.—This remarkable phenomenon was seen on the 10th of July, 1831, by *Juan Corrao*, commander of a brig going from *Trapani* to *Girgenti*, who perceived, at the distance of a gun-shot, a mass of water which arose to about 60 feet above the level of the sea, and presented a circumference of nearly 400 fathoms, and from which a smoke proceeded, exhaling an odour of sulphur. On the preceding day a great quantity of dead fish were seen floating on the water. From *Girgenti*, soon after, a thick smoke was seen, which continued to rise incessantly from the same point, and it was soon found that a tract of land had risen from the sea equal in circumference to that of the mass of water which had been previously raised.

The islet had now gained an elevation of about 12 feet above the surface of the sea, and had in the middle a kind of plain, and the crater of a volcano, whence a burning lava was seen to proceed during the night. The sounding around gave a depth of 106 fathoms.

The eruption increased and continued. In July, according to the description of Captain William Smith, of H. M. S. *Philomel*, the N.W. part was the highest, being then about 80 feet above the level of the sea, and becoming lower towards the southern extremity ; the S.E. side of the crater broken down even with the water, into which it kept rushing with great noise, and produced immense volumes of white vapour, which curled and spread to an extraordinary height ; then succeeded, in rapid succession, magnificent eruptions of cinders and lava to the height of from 400 and 500 to 1000 feet ; forking and branching out as the immense masses ascended, and then pouring down with a noise like thunder, making the water a sheet of foam for a considerable distance around. During the night the eruptions were not remarkable for a very great quantity of fire, though a constant shooting

SICULIANA.—At 4 miles inland, eastward of Cape Bianco, on a hill, is the miserable village of MONTE ALLEGRO; and, at 8 miles to the south-eastward of the cape is the town of SICULIANA, having about 4,500 inhabitants. The latter stands at a little distance inland, upon two hills, in an abrupt and barren country; it is pleasantly situated, but suffers greatly from mal'aria. The chief article of exportation hence is sulphur, of which there are extensive mines in the neighbourhood. For several miles westward of this place the coast is rocky and sterile; the fields appear neglected; the humble palm, on which the cattle sometimes browse, and the scilla, or squills, are suffered to overgrow the few arable lands. Many of the natives hereabout want the common necessities of life, bread being scarce and milk hardly to be procured.

The caricatore, or loading place, for the sulphur, is on the west bank of a rivulet, called the Canna; and before it, at nearly half a mile off shore, is a rocky shoal, which stretches along the coast, having over it from 1 to 3 fathoms, with 5 fathoms, sand, inside. Ships of burthen usually anchor about a mile and a quarter out, in from 7 to 11 fathoms, sand and clay, with large pebbles that rub the cables; but those of from 180 to 250 tons can pass the reef at a favourable moment, and moor securely inside it. In settled weather, and the lading ready, which it generally is, a vessel may ride comfortably about a mile and a half off shore, in 9 fathoms, mud, with Cape Bianco N.W. by N.; the Torre Felice, on the west of the rivulet, N. by E. $\frac{1}{2}$ E.; Siculiana castle N.E. $\frac{1}{2}$ E.; and Rosso tower, two miles distant, E.S.E.

South-eastward of the Bay of Siculiana, within the distance of $2\frac{1}{2}$ miles, the coast is without hidden dangers; but there are two brownish red points with rocky bases, having on them the towers of *Rosso* and *Rosello*, with a sandy cove between. At a mile without, the depths are 6 and 7 fathoms.

GIRGENTI.—At 4 miles eastward from Point Rosello are the Mole and Caricatore of Girgenti. This mole was constructed by order of Charles III. in 1756, but is already so worn by corrosion, as to appear much older. Its entrance is towards the east. The caricatore consists of about 100 houses, besides some extensive corn magazines and a prison, with a population of 700 individuals, exclusive of 200 or 300 wretched convicts, who are kept for the purpose of clearing the harbour from deposits caused by the winds. There are two lighthouses, one on the mole-head and the other on the cliff, but they are so kept as to be nearly useless.

The CITY of GIRGENTI, with 15,000 inhabitants, stands on the side of a hill, at nearly 1,200 feet above the level of the sea, and so that nearly every house may be seen. It is three miles inland, north-eastward of the mole; irregular, dirty, ill-paved, and poor in appearance; but clergy and monks abound. The cathedral is a large heavy structure of the thirteenth century. A high rocky mount to the eastward of the city is called *Rupa Athanea*; and below this, towards the sea, between the two branches of the River of Girgenti (*Acragas*), is the site of the antient *Agrigentum*, which once contained 200,000

shooting of small columns of fire was visible, with occasional flashes of sheet lightning. When near to it to leeward, the sulphur was nearly suffocating the crews of the boats.

In August it was reported by Captain Senhouse, flag captain of H. M. S. *Vincent*, who went to examine it, that it had recently increased in height, from 80 to 160 or 180 feet, and its circumference from three to five quarters of a mile. It was then in great activity, throwing up a vast quantity of ashes, which became hard in a few hours.

The eruptions subsequently and gradually subsided; and it was announced on the 3rd of January, 1832, that the islet had disappeared; while there then existed a column of boiling water, about 24 feet in diameter, rising from between 10 and 30 feet above the surface of the sea, and exhaling a strong bituminous odour.

Finally, it was found that, at the close of January, 1832, the islet had sunk some feet below the surface of the sea, leaving only a shoal, which had over it from $2\frac{1}{2}$ to 3 feet of water. On the 4th and 5th of February, Lieut. A. Kennedy passed it in H. M. steam-vessel *Messenger*, and found a sensible change in the smoothness of the water when under its lee for a short time. A heavy cross sea was running and the wind was strong.

According to Captain Smith, the shoal lies in lat. $37^{\circ} 11'$, long. $12^{\circ} 44'$, with Cape Granitola bearing true N. by W. $\frac{1}{2}$ W., 24 miles; Cape St. Marco N.E. $\frac{1}{2}$ N., 22 miles; and Cape Bianco N.E. by E. $\frac{1}{2}$ E., 25 miles; and the north end of Pantellaria S.W. by W. $\frac{1}{2}$ W., 43 miles.

M. Corrao gave the position as $37^{\circ} 6'$ N. and $12^{\circ} 46'$ E. Captain Swinburne, of H. M. S. *Rapid*, (who gave a copious and animated description of it,) as $37^{\circ} 7' 30''$ N. and $12^{\circ} 41'$ E. Near the spot Capt. Smyth's Chart shows a depth of 180 fathoms. For the description of a similar formation, near St. Michael's, see our Memoir on the Atlantic Ocean, page 223.

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inhabitants, renowned for power and commercial enterprise.* The space which was occupied by this city is now a continued range of orchards and gardens, and of groves of almond and olive trees. The fine vestiges of this city, still remaining, are simply described by Captain Smyth, and to his Memoir the reader is referred for an interesting description of the Temple of Concord, &c.

The *River di Naro* (ant. *Hypsa*) falls into the sea at $5\frac{1}{2}$ miles to the south-eastward of the Mole of Girgenti. At nearly half-way between is the River of Girgenti (*Acragas*), choked with shallows; and opposite to the stream of this river, at three miles from the coast, is the *Melville Shoal*, a bank to be avoided when standing in for the anchorage. This bank is half a league in length, trending E.S.E. and W.N.W. true, and has on its shoalest part from $3\frac{1}{2}$ to 5 fathoms, deepening gradually, with rocky patches, to 10 and 12, and thence, every way, to 13 and 15 fathoms. The shoalest part lies with the mole-tower on with the upper lighthouse; Rosello Tower open to the eastward of Rosso, and the central part of Girgenti N.E. by N. [*N. by E. $\frac{1}{4}$ E.*]

Between *Melville Shoal* and the *Mole-head* is excellent anchorage, which may be taken at choice, in from 10 to 7 fathoms, sand and clay, with a level and clean bottom. Although vessels are here exposed to all winds, from between the W.N.W., by the South, to S.E., no common gale need excite any serious apprehension. The following bearings give a station in command of the mole-head, in case of a S.W. wind, though farther out than a vessel need lie in the summer season.

Rosello Tower, N.W. $\frac{1}{4}$ W.; Mole prison tower, N. by E. $\frac{1}{4}$ E.; Centre of Girgenti, N.E. by E. $\frac{1}{4}$ E.; Point Bianco ($6\frac{1}{2}$ miles distant), S.E. $\frac{1}{4}$ S.

The mole is convenient; has a good watering place in the middle, and mooring-posts all round; terminated by a mole-head battery and the lighthouse before-mentioned: its depth cannot always be depended on, because southerly winds send in a quantity of sand and silt; but usually, at the mole-head and the inner part of the southern arm, there are $2\frac{1}{2}$ and 3 fathoms, decreasing rapidly towards the centre to 11 and 9 feet towards the shoal that stretches from shore. A vessel going in should be certain that there is a vacant berth; for the port being small, and the only one on the coast, is generally crowded. Should the mole be sufficiently clear, as much sail must be kept set, till the moment of anchoring, as will give considerable way in; for the wind and current, being acted upon by the mole-head, often cause a ship to drift out. If the weather permits, a hawser should be previously sent to be made fast to the mole-head mooring post, and taken on board the moment the vessel is rounding it, to prevent her falling on the shallows.

By a port regulation, when ships arrive, the first that delivers her ballast, and takes in any portion of her cargo, as a few pigs of sulphur, or a little grain, or any other article, must be completely loaded before another is commenced. This regulation is generally advantageous to commanders acquainted with the place.

It is now to be observed that there is a dangerous sunken rock, at about a mile and a quarter out, opposite to the mouth of the River Naro. It has only 4 feet of water on it, with 6 or 7 fathoms all round, at the distance of a few yards. It lies with Rosso Tower over a white cliff to the westward, and the round white tower of Palu (3 leagues distant,) S.E. $\frac{1}{4}$ E. between Point Bianco and Monte Grande, described hereafter.

POINT BIANCO lies 3 miles S.E. $\frac{3}{4}$ S. from the rock last described, and off it are two rocks above water, of which the largest is named the *Patella*. There is a passage, of 7 fathoms, nearly half a mile broad, between them and the main.

MONTE CHIARO.—The outer point of *Monte Chiaro* is two miles to the south-eastward from Point Bianco. On the summit of the hill is a castle, consisting of a large square keep with outworks, and at the base is a continuous shelf of rocks along shore, which break to some distance outward. In rough weather the land here is almost inaccessible.

PALMA.—At about two miles inland from the beach, and three miles eastward from Monte Chiaro castle, is the respectable town of Palma, containing upwards of 8000 persons, who enjoy comparative affluence, which arises chiefly from a brisk trade in almonds and sulphur. The town overlooks one of the finest vales in Sicily, and is

* See Captain Smyth's classical plan of the City, Environs, and Anchorage, of Girgenti; which is similar to that of Syracuse, mentioned on page 159.

well regulated. The adjacent country, also, is well cultivated, and many cattle are reared on wastes and commons in the vicinity.

The S.E. point of the Bay of Palma is *Point Tenda*, which is $3\frac{1}{2}$ miles from the point of Monte Chiaro. In Palma Bay, westward of this point, is the Marina of Palma, with some magazines and a stout tower for their protection. Vessels ride off this place in from 5 to 8 fathoms, good ground, but exposed to the sea. The round white tower of *Palu*, on the brow of a hill two miles eastward from the beach of Palma, is an excellent mark for this coast.

ALICATA.—The town of ALICATA, or *Licata* (ant. *Phintia*), with about 11,000 inhabitants, stands at the distance of three leagues S.E. $\frac{1}{2}$ E. [*E.S.E. $\frac{1}{2}$ E.*] from Point Tenda. On this bearing, at the distance of half a league from that point, is *Point Rosa*, and off this point is a bank of 7 fathoms, but clear of danger, with slight overfalls only. The middle of the bank is nearly on the meridian of Palu Tower, above-mentioned.

We have now arrived to the semi-circular bay of *Grugno*, the outer points of which are a league asunder, and the coast within a sandy beach. In the middle of this bay is the mouth of the little River *Ciotta*, with its bar. On the rising land, east of this river, is the high, but useless, tower of Grugno, with a few magazines at its base. The coast hereabout may be approached by the lead with the utmost safety.

At a mile eastward from the Bay of Grugno is a singular little cove, called Port Nicolo, where small craft find shelter, in from 4 to 2 fathoms. This harbour is formed by an islet of rock, connected to the main by a narrow neck of low land, and a large valley stretches from its beach towards an extensive plain, that of *Serrata*.

The ground about ALICATA is rocky and shoal; the town has two tolerable forts, but the walls have gone to decay, and are lying in large fragments on the beach. Here are several churches and convents, but the general appearance is that of neglect and poverty: yet the town is a place of some trade in the summer season, being a caricatore for the export of grain and sulphur. "In no part of the S.E.," says Captain Smyth, "is the want of a port so severely felt as at Alicata, although there is every local advantage for forming one with facility, and at a moderate expense, as two reefs of rocks off the west end of the town could easily be converted into excellent moles," &c.* (*Memoir*, p. 300.) The hill on the west of Alicata is the antient *Ecnomus*; on the N.E. the river Salso falls into the bay; this river was the *Southern Himæra* of the antients, and is considered as the largest in Sicily: on its eastern bank is the Fonducello Hillock. Over the Salso is a large bridge, with a single arch, built by order of Charles V.

The usual anchorage is about a mile S.W. of the town, in from 7 to 12 fathoms, good clay bottom: but it is exposed in winter to all winds from West, by the South, to East. In coming to, stand in by the lead, and bring the flagstaff of the sea castle to bear well to the eastward of the Fonducello Hillock, and drop the anchor as nearly as possible to the following bearings, buoying up the cables in light winds, to prevent chafing.

In $8\frac{1}{2}$ fathoms, mud, about a mile off shore, Palu Castle, above Tenda Point, N.W. $\frac{1}{2}$ N.; Upper Castle, N. $\frac{1}{2}$ E.; Sea Castle, N.E. by E. $\frac{1}{2}$ E. [*N.E.*]; S. Nicola Rock (distant $4\frac{1}{2}$ miles), E. $\frac{1}{2}$ N. [*E.N.E.*]

The RIVER SALSO divides the provinces of Mazzara and Noto. At its entrance is a shoal bar of nearly a mile, on which the surf beats heavily with southerly winds. Boats may be admitted into the river, but the pass is narrow and difficult.

TERRA-NOVA.—At the distance of 14 miles E.S.E. [*E. $\frac{1}{2}$ S.*] from Alicata is the caricatore of TERRA-NOVA, the antient *Gela*. The first part of the coast between is the beach of *Foggitella*, which terminates at the rocky head of *S. Nicola*: beyond this, at the distance of two miles, is the rocky point of *Falconara*, distinguished by a large square tower, some magazines, and a country seat, near which are some beautiful and fertile grounds. The distance hence to the caricatore of Terra-nova is $8\frac{1}{2}$ miles, and half-way between, over a projecting point, is the *Torre di Manfra*. The coast is generally an open beach.

* Captain Smyth, at the urgent request of the inhabitants, presented a plan for the formation of such a port to the Sicilian minister at Palermo, in which he represented the evident superiority of this port over Girgenti, its resources, and nautical advantages. The town volunteered to defray all attendant expenses. If Alicata were in England, the object would soon be accomplished; but in Sicily —!

The town of *TERRA-NOVA* stands on a tabled hill, and the neighbourhood constitutes the Geloan fields, so celebrated for corn. The town is finely situated, but the streets are confused and dirty. It has a fine palace, but its other edifices are unworthy of particular notice. The population, about 9000, maintain a brisk trade in sulphur, corn, wine, and coarse cloth; the last article, in particular, finds a good market at the commercial fair held in August.*

The anchorage is about a mile from the town, in from 7 to 11 fathoms, sand and mud; but it is much exposed, and every change of wind should be watched, as that from the S.W. sends in a great sea; and when it blows fresh there is not room to get under way and make sail. Small craft lie at the west end of the caricatore, under the *Torre dell' Insegna*, which stands at a small distance from the town, on the high land.

At $2\frac{1}{2}$ leagues S.E. $\frac{1}{2}$ S. [*S.E. by E.*] from the Caricatore of Terra-Nova is the mouth of the *River Dirillo*, the antient *Achates*; and at three leagues S. by E. $\frac{1}{2}$ E. [*S.E. by S.*] from this river is the village and caricatore of *Scoglietti*, with capacious magazines on the side of a small rocky bay, which is entirely open to the heavy westerly winds so prevalent in winter, and which produce much mischief here.

CAPE SCALAMBRA, &c.—At half a league to the southward of Scoglietti is a small bay, on the southern side of which is the site of the antient *Camarina*; the eastern side of this bay is now a marsh, through which a stream, the antient *Hipparis*, finds its way to the sea. At three miles more to the south is *Point Braetta*, and thence S.S.W., at the same distance, is *Cape Scalambra*. The last is a low rocky projection, and there are several points between it and Scoglietti. A reef extends all along this coast, which is a coast greatly dreaded by the antients, and upon which, also, many modern ships have been lost, although it is approachable by the lead. Ships passing should never stand in within 14 fathoms; and, with a westerly wind, in particular, every precaution should be taken, allowing for current, &c.

On the eastern side of Cape Scalambra is *Port Secca*, (ant. *Caucana*), a good place for vessels of light draught, being secured against a south-wester by a long low rock, but difficult of access with the wind blowing fresh, owing to the heavy overfalls on the coast. Eastward of Port Secca at $2\frac{1}{2}$ and 5 miles, are the sandy bays of *Muzzarella* and *Donna Lucata*.

In all these places small craft repair for cargoes, and in each the carubba, or locust bean, charcoal, wood, and some other produce of the district, are embarked.

The rocky point of *Spina*, the termination of a broad and elevated headland, lies at the distance of 8 miles S.E. by E. from Cape Scalambra. Here the coast again becomes foul and rocky. At 3 leagues farther, E.S.E. $\frac{1}{2}$ E. [*East*] is *Pozzallo*, the principal caricatore of the country for the export of its produce; it affords summer anchorage, has a small pier, several magazines, a baronial palace, and a church, defended by a fort with a small garrison. This village has a flourishing appearance, and the inhabitants are healthy and industrious. Black cattle, sheep, pigs, rabbits, pigeons, fruit, and vegetables, may be purchased here at a moderate rate.

Between Point Spina and Pozzallo, at a league eastward from the former, is the cove of *San Pietro*, where, on a rocky point, at the end of a sandy beach, is a caricatore and miserable village of 300 inhabitants: two other rocky points beyond this are named *Corvo* and *Gregorio*.

COAST to CAPE PASSARO—To the eastward of Pozzallo, at the distance of five miles, are the tower and oratory of *Rosolini*, beyond the rivulet of *Busaidone*, the limpid stream of which irrigate the lands of *Spaccaforo*, a walled town on a hill, three miles inland. This town has about 8000 inhabitants, with numerous churches, convents, and public buildings. The trade of this district is principally with Malta, and its exports are grain, flax, carubbas, acorns, soda, and cattle.

* The inland and well-governed city of *CALTAGIRONE* stands at the distance of 17 miles to the N.E. It contains 20,000 inhabitants, is opulent and extensive, and conduces greatly to the prosperity of Terra-Nova, whence its exports are made. This city stands on a rocky hill, in a salubrious situation, and is said to be on the site of *Hybla Hærea*; its streets are clean, spacious, and well paved; many of the palaces and other public buildings are handsome; the market is well supplied with provisions at moderate rates: notwithstanding all this, there are many beggars and idle persons. A great festival and fair is held here in October, for fifteen days, during which great sales are made of cattle, cloth, honey, poultry, and agricultural produce.

Two miles southward from Rosalini is Point Grotta, westward of which, at the distance of about a mile, is a group of flat rocks called the *Porri*, having a species of wild leek growing on them: southward of Grotta Point there is also a reef, the extremity of which is marked by two rocks above water, called *Chiappe*. Between these and the *Porri* there is a good channel, of 8 or 10 fathoms. In the day-time the *Porri* may always be approached with the lead.

Immediately to the eastward of Grotta Point is the small shallow bay of *La Marza*; where charcoal and wood are embarked. Near the centre of it a spring of fresh water rises through the sea: and on its eastern point is Castelluccio, a wretched village.

CURRENT POINT, the southernmost point of Sicily, is nearly two leagues to the south-eastward of *La Marza*. Close to this point is the *Current Islet*, a sand-stone rock, divided from the main by a spit with very shallow water, over which even small boats cannot pass. On the N.E. side of the islet is a kind of natural mole, where the Maltese trading boats sometimes take shelter. Northward of this is a cove called *Fontanello*, with regular soundings, mud and sand; this extends to *Point Formiche*, on the north, a low white cliff, off which five black rocks appear just above the surface of the water, and a reef borders the shore to the distance of nearly a mile, having over it from 6 to 2 fathoms of water. This reef continues to beyond *La Marza*, &c.

Within Port Fontanelle is a smaller cove, between some picturesque white cliffs, with the remains of some antient sepulchres in a kind of rubble work. The neighbourhood is low, marshy, and neglected, and overrun, in many parts, with a luxurious profusion of heaths, myrtles, fan-palms, capers, and junipers: while, also, singular reptiles and insects abound.

From the extremity of the Current Islet, Cape Passaro (described on page 161) bears E. by N. [*N.E. by E. $\frac{1}{2}$ E.*] distant 4 miles. The coast between is entirely bordered with a reef, one-third of a mile in breadth.

3.—THE ISLANDS OF MALTA, GOZO, LINOSA, AND LAMPEDUSA.

The ISLANDS of MALTA, GOZO, and CUMINO, occupy an extent, *S.E. by E.* and *N.W. by W. true*, of $8\frac{1}{2}$ leagues. *Cape St. Demetri*, the N.W. end of Gozo, lying in latitude $36^{\circ} 3'$, long. $14^{\circ} 10'$, at 50 miles S.E. $\frac{1}{2}$ E. [*E.S.E.*] from the S.E. end of Pantellaria; and *Point Benhisa*, the S.E. end of Malta, in lat. $35^{\circ} 49\frac{1}{2}'$, long. $14^{\circ} 33\frac{1}{2}'$. (For *Pantellaria*, see page 163).

MALTA.—MALTA is celebrated for the magnificence of its capital, the grandeur, extent, and strength, of its fortifications, and its importance to England.—In the *Odyssey* of Homer this island is mentioned under the name of *Hyperia*, and it is recorded, that a colony of Phœnicians was established upon it 1500 years before the Christian *Æra*. It was subsequently called *Ogygia*; and, while bearing this name, the Phœnicians were driven from it by the Greeks, who, about 736 years before Christ, called it *Melitaion*, or *Melita*, whence its present name is derived. Here the Greeks established the worship of Apollo, their favourite, and *Archons*, or magistrates chosen for life, governed the island.*

Gozo

* In rather more than two hundred years after the first settlement of the Greeks, the Carthaginians disputed their right of possession, and the island was, for some time, divided between them: but, ultimately, the Carthaginian power prevailed, while both the Greek and the Punic, or Phœnician, languages, were equally spoken.

At length the riches of Carthage, which had flowed to Malta, rendered it a desirable acquisition to the Romans, by whom it was afterwards captured: and thus was introduced a third language, and a third admixture of national habitudes and customs. On the division of the Roman empire, Malta fell to the lot of Constantine, when the antient energy or *ferocity* declined and expired. In 454 (A.D.) the Vandals had entered Sicily, and next took possession of Malta, from which, ten years afterward, they were driven by the Goths. Under Justinian, however, in 553, Belisarius landed, and re-united Malta to the empire, from which time its opulence again increased, but it has never recovered its former splendour.

In A.D. 870, the Arabs were in possession of Malta, but were driven out, in the same year, by the Greeks: thirty-four years after, they entered a second time, and exterminated the Greeks, although

GOZO and CUMINO were always attached to the fate of Malta. By the Greeks Gozo was denominated *Gaulos*, and Cumino *Hephestias*.

A stranger, on his arrival at Malta, cannot but be greatly struck with the change of character which its inhabitants have undergone since the time of the Order. Under the government of the Knights, the agriculture and commerce of the island alike languished: the scene has since changed; and Malta has become one of the greatest depôts of merchandize in the whole Mediterranean: and the natives have acquired habits of industry, and developed sources of profit, to which they were formerly total strangers. The Maltese, who have recently traded to the Adriatic and the Black Seas, must congratulate themselves on observing that their own port, formerly of no account in commerce, is now a scene of far greater activity and profit than either Genoa, Naples, Venice, or even Leghorn.

THE ISLAND OF MALTA lies between the latitudes $35^{\circ} 49'$ and $35^{\circ} 59'$, and between the meridians of $14^{\circ} 19'$ and $14^{\circ} 36'$. Its easternmost point is 55 miles S.W. [*S.S.W. $\frac{1}{2}$ W.*] from Cape Passaro, and 54 miles S. by W. $\frac{1}{2}$ W. [*S. $\frac{1}{2}$ E.*] from Cape Scalabrin, in Sicily. From the point last mentioned, *Cape St. Demetri*, the N.W. end of Gozo, bears S.W. $\frac{1}{2}$ S. [*S.S.W. rather southerly*], distant 46 miles. The passage between is that called the *Channel of Malta*.

The South coast of Malta is altogether clifty and destitute of harbours; it is full of grottoes or caves; the rocks being, for the most part, craggy: but, facing the S.E. is a large bay, named *Marsa Scirocco*; and, on the N.E. side, at 4 miles from the easternmost point, (*Schawopologon*), is the GRAND PORT OF VALETTA, the capital of the island. On the west of the latter, separated by a peninsula, on which stands the city and its fortifications, is another large port, called *Marsa Musceit*, or *Port Muscet*, having, on its west side, a small island, near which all vessels from the Levant, or any other place suspected of contagious disease, perform quarantine.

At nearly two leagues to the north-westward of Marsa Musceit is an open bay, that of *St. Paul*, which faces the N.E.; and beyond this, on the west, divided from it by a peninsula, is the larger port or bay of *Melheha*, completely open to the N.E. These are the principal bays of Malta, but there are several smaller harbours, which have been accurately surveyed by Captain Smyth, as shown in his Atlas of Sicily, &c.

The Maltese islands are calcareous rocks, containing some petrifications and concretions. This rock is mostly of a porous nature, and a great proportion of it is covered with earth, originally brought from Sicily, &c. The ground is never suffered to remain uncultivated, but is constantly sown every year. Each season yields its peculiar crop, and, considering the nature of the ground, the produce is extraordinary. The colour of the soil varies in the different districts, and it is seldom more than one foot deep above the surface of the rock: in summer it is irrigated chiefly by the night-dew; but the rock, being porous, retains the moisture, and keeps the earth constantly fresh. The earth is always removed once in ten years, in order to clear the rock of a thick crust, which forms and prevents the moisture from sufficiently penetrating.*

When

though the rest of the inhabitants were, in general, spared and protected. A system of piracy now ensued, and the Maltese became the ablest corsairs in the Mediterranean Sea.

In 1090, the Normans took possession of Malta, and they afterwards ceded the island to the Germans. It continued in subjection to the emperors for seventy-two years, and then fell under the dominion of France: but shortly after, *Roger*, Admiral of Arragon, subdued the island, and it became a fief of the kingdoms of Arragon and Castile: but was, ultimately, united to Sicily.

Such were the changes which had taken place in the government of these islands, when the emperor Charles V. added them to his vast domains. This potentate seems to have been the first who understood the real value of these possessions, and who appreciated them as deriving that value from their commanding situation over all the adjacent seas. In 1530, he made choice of the order of St. John of Jerusalem, and established the knights of that order, conditionally, as perpetual sovereigns of the islands of Malta, Gozo, &c. Of these knights the superior was *Grand Master* of Malta, and he was invested, for life, with the rights of sovereignty over the islands. This mode of government continued until June, 1798, when General Buonaparte gained possession, previously to his landing in Egypt. On the 26th of September, in the same year, the islands were, in consequence, put into a state of blockade by the British forces, which was continued against Malta until the 4th of September, 1800, when it surrendered. Since this period, we need hardly say, the islands have continued under the British flag; and, under that protection, may they ever flourish!

* "Malta seems rather to have been intended for a quarry than a habitation of man; for it contains little else beside stone. In Sicily, every advantage has been lavished by nature, and none obtained

When the ground is properly prepared, it produces, in the first year, water-melons and garden-plants; in the next, an excellent fruit, preserved during the winter, and distinguished by the name of *Maltese melons*; and afterwards barley, the straw of which furnishes fodder for the cattle. The ground is ploughed in the third year, and planted with cotton; and, in the fourth, sown with corn. The land afterwards yields these different crops alternately; but care is always taken to prepare the ground, particularly in the year in which the cotton-tree is to come into bearing, when it is necessary to reduce the earth into a kind of powder.

The greatest part of the country is planted with cotton; of which three species are cultivated; one natural to the country, another from Siam, and a third, of a cinnamon colour, called that of the *Antillas*. Wheat is sown in November, after the ground has been ploughed three times, and cut in the beginning of June; barley likewise is sown in the same month, and reaped in May. There is a kind of corn in Malta called *tommon*, which grows in poor land, and the bread made of the flour is particularly white. This grain is sown in February. Every field is inclosed with stone walls, five or six feet high, to shelter the plants from the effects of wind, rain, and storms, during the spring and autumn.

Necessity has taught the Maltese to make a sort of artificial land in the barren parts of the island. The process is laborious and expensive; but, with ordinary perseverance, it becomes, in time, equally fertile with natural land.

Malta and Gozo produce various fruits, of exquisite flavour, with excellent roots and very fine flowers; the roses, in particular, are described as more sweetly scented than those of any other country. These islands likewise yield great quantities of *cumino*, *aniseed*, *kali-magnum*, *loricella*, *silla*, and *lichen*; the last grows on the rocks exposed to the north, and is used for dyeing the amaranthus colour. *Silla* is peculiar to these islands; it grows to the height of five feet, bears a red flower, and serves for fodder.

The gardens in Malta are numerous; especially towards the east: they are generally ornamented with groves of orange and lemon trees; but these are not permitted to grow to any height on account of the wind, which would blow off the fruit and break the branches. The greatest attention is paid to the orange-trees, which are commonly watered twice a-day. Their tops are trimmed into a round form, resembling an umbrella, and they grow on one single straight stem, as do likewise the lemon-trees, the branches of which are sometimes suffered to extend till they form a kind of bower. These trees are almost all raised in tubs, and placed in the most sheltered spots. Kitchen-gardens have greatly increased in Malta, and produce cauliflowers, with other vegetables, of the finest quality. Water is constantly kept for their use, in cisterns hewn out of the rock, and trenches are dug around them to collect the rain.

Bees are kept, in great quantities, in some parts of the island; the hives are horizontal, in the eastern style. The honey has a most delicious flavour, and the ancients compared it to that of Hybla. The asses, which are called *janets*, are famous for strength and beauty. The ewes are incredibly fruitful; they commonly drop lambs three times a-year, and sometimes year four at a time. Frequent flights of birds of passage recreate and reward the sportsman: of these, beccaficos, quails, and plovers, are most delicate juicy food. The finest fish is very abundant on the coast; and is, consequently, cheap. The oysters are not good, but a variety of other excellent shell-fish supply their place.

Fertile, however, as Malta is, in many parts, it is far from being able to furnish its population, of more than 90,000 persons, with the necessities of life, without foreign assistance.* The corn grown in Malta would not supply more than one-third of the inhabitants with bread, hence large quantities are imported from Sicily and other places.

obtained by art. Here it is exactly the reverse; industry has raised splendid palaces and fruitful fields, where nature had laid down a rocky desert. The very hedges of the fields are masses of stone piled on one another."—Turner's *Tour in the Levant*.

* In 1632, the population of Malta and Gozo was 51,750. In 1798, Malta contained 90,000, and Gozo 24,000, inhabitants. Total, 114,000: a very extraordinary population, in proportion to the small extent of the islands.

Horses are rare in Malta; as beasts of burthen, asses or mules are chiefly employed. Goats are numerous, but there are few black cattle. The ox is brought either from Barbary or Sicily, and is fattened with the seed of the cotton, which renders the flesh delicate. The poultry consists mostly of the common domestic fowl and abundance of pigeons. Rabbits, also, abound.

It

It is equally necessary to import wood, wine, oil, brandy, &c.; the natural productions being, indeed, very trifling in comparison with those imported. Cotton, the growth of the country, and of a very superior quality, either in bales, worked up into cloths or coarse stuffs, or in a spun state, is the chief article of produce exported; and, in comparison with this, the other articles are trifling: the latter are, *kali-magnum*, mostly to Venice; lichen to Sicily; oranges, to all parts; orange flower-water, or *stagnone*; lemons; preserved apricots, called *alexandrini*; excellent pomegranates; honey, which always remains in a liquid state; seeds of different kinds, such as cabbage, brocoli, melon, cumin, and aniseed; kali, of an excellent quality; and Maltese stone, which was a great article of commerce in Sicily, the Levant, and Smyrna; also clocks, boilers, &c.

Malta is, from its situation, remarkably salubrious; epidemic affections rarely occur; but the same diseases return every year, with more or less virulence, according to the nature and constitution of the season, which all partake, more or less, of a bilious character. Genuine inflammatory disorders are seldom present in the island; during the spring, however, bilious remittent fevers prevail. Of all the seasons, summer is the most healthy; but at the beginning of autumn, and during part of the winter, fevers of a putrid and malignant type are prevalent, which carry off the patient in two or three days, if speedy relief be not afforded. Temperance is the best preservative against these maladies. Strangers, especially on first landing, should be cautious to avoid exposure to the damp air of the night; they ought also to relinquish the use of spirituous liquors, live chiefly on vegetables, and eat only a very small portion of animal food. That passion, to the indulgence of which the licentiousness of the Maltese females offers so many temptations, must likewise be resisted.

The four seasons are regular and well defined. The spring is delightful, and accompanied with a sweet and temperate air. In the month of March, the sky becomes clear and serene, the clouds are dissipated, and there is seldom any fall of rain; during the greatest part of this season the wind remains in the north, but it begins to abate, and veers occasionally towards the east; the sea becomes calm, and the nights are extremely cool and pleasant. There are, during this season, some land and sea breezes, as well as in summer and autumn.

In June the heat is considerable, and it continues to increase during the whole summer. The winds are almost imperceptible, and, for the most part, in the east; the sea is then calm, and no country appears more delightful: the stars appear with the greatest lustre, and the atmosphere is unclouded, both by day and night.

In September, the sky begins to be obscured by clouds; towards evening the atmosphere is charged with electricity, which produces frequent lightning, often attended with violent peals of thunder, and sometimes even slight shocks of an earthquake are felt. The South and S.E. winds, which, at times, prevail during this period, do not blow with much violence, but they are so loaded with humidity, and so hot, as to render the climate almost insupportable.

From December to March the sky is covered with clouds, and the rains are very abundant. The sea is in a constant state of agitation; the winds are cool, and blow from the North, N.W., West, or N.E., with great violence.

The thermometer of Fahrenheit during the summer is generally below 88 degrees, and scarcely ever above 95. In winter it falls down to 48°; but heat and cold are not most felt when the thermometer is at either of the two extreme points of temperature. The different directions of the wind produce an instantaneous change from cold to heat, and from heat to cold. North and N.W. winds always occasion cold; and a South wind constantly brings heat. A N.W. wind purifies the air in the greatest degree; a N.E. wind is not quite so pure, and it becomes infinitely less so when it changes to the S.E. or South; but it again becomes better when it veers to the S.W., particularly if the sea be much agitated.

The N.W. wind is purified by the vast expanse of sea which it passes over; but the North wind would suffer some degree of alteration from Italy and Sicily, if the great vegetation in those countries did not tend to purify the atmosphere. When the wind changes to the South it becomes dangerous, owing to its having passed over the barren burning continent of Africa, where there is scarcely any vegetation, and where the heat is so intense that every thing susceptible of rarefaction in the earth produces exhalations which enter into the atmosphere. It is not purified by passing over the sea, because

the channel is narrow; and, being sheltered by the land, the water is not sufficiently agitated to absorb, by its motion, the mephitic miasmata with which the air is impregnated.

The extreme cold during winter is produced by the pure air which blows from the north. The winds then act with violence, and continually renew the volume of air. In summer, when the wind has prevailed from the S.E., the usual purity of the air is so greatly altered, that, were it to change a few degrees more, it would become exceedingly dangerous, and might even produce suffocation.

The south winds (*scirocs*) never blow long at a time, seldom lasting more than three or four days. They are frequently succeeded by a calm, during which the heat is also very great, but much less oppressive and suffocating, though the thermometer frequently shows a much higher degree of real heat. The air is then infinitely more pure; and the sea-breezes during the night, and, indeed, some part of the day, greatly refresh the atmosphere. This air is purified by passing over the water, which it gently agitates. There is, also, a morning land-breeze, which, though less pure, cools the air in some degree. When the wind changes suddenly, from the south to the north, we here feel an astonishing lightness, our sensations are inexpressibly pleasant, and we breathe with the greatest freedom. It is a certain fact that, on these occasions, the air becomes much more pure, though there is no variation in the thermometer.

Nothing is more salutary, during the Scirocco, than iced beverages; they revive the spirits, strengthen the body, and assist digestion. Snow is, therefore, considered at Malta, as one of the first necessities of life. It is brought from Sicily, and administered to the sick. Whenever there is a scarcity of this article, all that remains in the ice-houses is entirely reserved for the use of the hospitals.

STRUCTURE OF THE ISLANDS.—Malta is irregular in figure, and its surface is composed of small valleys, defiles, and hills. It has been conjectured that Malta, Cumino, and Gozo, are the remains of a large tract of land which once extended towards the S.S.W., and which have resisted the violence that caused the destruction of the country of which they formed a part. To have a just idea of Malta, we must figure to ourselves an inclined plane, extending from S.S.W. to N.N.E., (*true*) in such a manner that the calcareous strata, of which it is almost entirely composed, rise towards the South and S.E. nearly 200 fathoms above the sea, which dashes against the bottom of these declivities: at the same time, on the opposite side, they are of considerable length, and decline insensibly till they become level with the sea. The broadest part of the island, and the flattest, though sufficiently elevated, is that to the east of the city, Valetta; this part is consequently more peopled, and most easily cultivated; although here, as in all other places, the rock is entirely naked, excepting where the hand of industry has placed a layer of earth to encourage vegetation. The principal defiles and valleys extend from S.W. to N.E., and all seem as if formed out of the rock by the violent currents of water rushing from the heights.

MALTA contains two cities, and twenty-two *casals* or villages. The original capital being *Citta Vecchia*, the Old or Notable City, which still preserves, among the inhabitants, the name of *Mdina*, signifying City, and it is the seat of the Bishopric. Besides the cathedral, which is large and handsome, it contains several other churches, &c. The town is so elevated that from it may be seen the whole island, and sometimes the coasts of Africa and Sicily. The catacombs in this place have always been celebrated; they are very extensive, and contain streets in all directions, which are formed with such a degree of regularity, that they have been called the *Subterraneous City*.

Near *Citta Vecchia*, on the South, is the Grotto of St. Paul, which is used as a church, and which is an extraordinary cave divided into three separate parts by iron grates, &c. The sepulchral grottoes of the *Benjemma Mountains*, at two miles to the westward of *Citta Vecchia*, also rank among the great curiosities of Malta.

In the craggy rocks around Malta and Gozo are many spacious caves or grottoes; into some of which, being on a level with the sea, the waves dash in, when in an agitated state, and resound tremendously. The mouths of others are at different heights, and the access is more or less difficult and dangerous according to their situation. One of the most considerable of those usually visited is situate near Point Benhisa, the S.E. point of Malta, and this extends more than 200 paces under ground. All these grottoes are full of *stalactites* and *stalagmites*, produced by the water's filtering through the calcareous

careous rock. Another great curiosity of the same nature is the excavation *Mahluba*, west of the casal or village of *Zurig*, half a league from the south shore.

Malta, in general, is considered as divided into two very unequal parts; the one to the east, and the other to the west, of *Citta Vecchia*. All the casals (villages) are in the eastern division, which is much larger than that to the west: the latter containing only detached houses, among scenery which is commonly picturesque; but the air towards the coasts being very unwholesome, and there being a scarcity of land capable of cultivation, farmers are not tempted to reside in it. The whole of this part abounds with odoriferous plants, and it has considerable salt-works.

The MALTESE, although subjugated, from time to time, by different nations, retain the peculiarities of an original character. Many countenances indicate an African origin. They are commonly short, strong, plump, with curled hair, flat noses, turned-up lips, and the colour of their skin is the same as that of the people of Barbary: their language, also, is so nearly the same, that they perfectly understand each other. They are, generally, industrious, active, faithful, economical, courageous, and rank with the best sailors in the Mediterranean Sea: but, with these good qualities they retain defects attributed to the Africans: being mercenary, passionate, jealous, and vindictive. The indigent, a very numerous class, are too frequently dishonest. The people, in general, are highly fantastical and superstitious, but their ignorance does not wholly unfit them for the cultivation of the arts. Their temperance is exemplary. They are fond of coffee and chocolate, and drink wine imported from Sicily. Their food consists chiefly of vegetables and fish. On festivals they eat pork; and hogs are very common in the towns and villages. Than the Maltese no people are more attached to their country, and their constant hope is to end their days in what they dignify with the title of *Fiore del Mondo*, or the Flower of the World.*

GOZO stands much higher than Malta, and is entirely surrounded by perpendicular rocks: the highest are to the west and south, where they are tremendously steep. The opposite cliffs of Malta and Gozo are correspondent; but, though there are some valleys in the same direction as those of Malta, they do not afford any port of consequence, on account of the height of the land and its breadth. The country is not so uneven as that of Malta, consequently it is more easily cultivated; and it appears that the surface was, originally, nearly horizontal. The rock, however, is decidedly of the same nature in both islands, which are equally mountainous; some single, some forming chains, the summits of which are for the most part flat.

The pasture land of Gozo is fine, and great quantities of cattle are fed here for the use of Malta, with which there is a daily communication. The grapes of this island are particularly fine, and so highly esteemed by the Maltese, that they buy up the greatest part for their own particular use. Corn and cotton are cultivated with success: the air is particularly wholesome, and the country presents a variety of agreeable prospects. It contains six casals or villages. A castle stands on the summit of the island, and on its S.E. coast is another, *Fort Chambray*. The interior fortress stands on a solitary rock, of not more than 150 fathoms in diameter. This island seems to have been formerly adorned by many sumptuous edifices. In the heart of a mountain in the N.W., near *Zabug*, is a quarry of alabaster.

MARSAL FORNO, or *Forno Bay*, near the middle of the North coast, affords anchorage for small vessels, as does also the *Calle Ramla*, or Ramla Cove, one mile more to the east, and *Port Miggiaro*, on the S.E. side, where there are salt-works. At half a league from the latter, towards the S.W., is a small inlet or port, passing which, and by keeping at a little distance from the coast hereabout, it is impossible not to be struck by the variety of rocks, caverns, &c. Here is to be seen the famous shelf distinguished for producing the *Fungus Militensis*, or Maltese mushroom; and farther on is a coast, formed of caverns and vertical rocks, from 150 to 160 feet high, above the water: the same rocks are buried in the sea to a very great depth, but they are of so white a colour, and the water so transparent, that they may be easily distinguished, at a considerable

* This is from the character given by the *Chev. Louis de Boisselin*, a Knight of Malta, in his work entitled '*Antient and Modern Malta*', 2 volumes, quarto, 1804-5. To this work we are indebted for a considerable portion of the present description of the Islands. For a more complete detail it may be satisfactorily consulted; as may, also, the Description from the French of *Dr. Robert*, in the *Monthly Magazine*, 1803.

depth, under the waves. Cliffs continue all round the western coast, but they are not so high as those of the south, and are broken in several places.

CUMINO.—The small and irregularly-formed isle of CUMINO, which lies between Gozo and Malta, partakes in the character of Gozo. Its greatest length, from N.E. to S.W., is two miles, and its western (or rather N.W.,) side forms three small coves, the depths in which are 2 and 3 fathoms. There is a tower on the height at the south end; to the westward of which is the islet *Cuminotto*, with several rocks.

The two channels divided by Cumino are denominated the *Passages of Gozo and Malta*. Both are very good, and have from 12 to 20 and 30 fathoms of water. By keeping in the middle of either channel, you may find these depths, with fine sandy bottom.

ST. PAUL'S or BALL'S BANK.—A bank thus named, which is $3\frac{1}{2}$ miles long, from N.W. to S.E., lies at half a league to the N.E. of the Passage of Malta, or the Channel between it and Cumino. It is more than a mile in breadth, and its depths are from 7 to 14 fathoms. Much of the ground is very good, but there are rocky patches, which may be readily seen with a water-glass. Here you may have a good winter anchorage; the passage between Malta and Cumino being open to run through, in case of being driven from your anchors by a N.E. gale, which is frequent here. The N.W. part of the bank is rocky, and particularly all soundings under 9 fathoms. The best marks for anchorage, in about 13 fathoms, are, St. Paul's Tower, in the Bay of St. Paul, over Salmonetta or Salmona Isle, S. by W. $\frac{1}{2}$ W.; the University tower, near Kaura Point, S. $\frac{1}{2}$ E.; and the north point of Malta, W. $\frac{1}{2}$ N.

The N.W. end of the Bank, with 13 fathoms, lies with the northernmost point of Gozo N.W. by W., and the N.W. end of Cumino W.N.W. $\frac{1}{4}$ W.

The S.E. end, with 14 fathoms, lies with the northernmost point of Malta W. $\frac{1}{2}$ N. $2\frac{1}{2}$ miles; the church on Gozo nearly on with the north end of Cumino, W.N.W.; and St. Paul's Tower, over Salmonetta or Salmona Isle, S.S.W. $\frac{1}{4}$ W.

From the depth of 7 fathoms, on the western part, the eastern angle of Citta Vecchia bears S. $\frac{1}{2}$ W., and the tower on the island Cumino W.S.W. $\frac{1}{2}$ W. This part is entirely dangerous; as it breaks with easterly and N.W. winds.

The open Bay of MELHEHA lies directly opposite the eastern part of St. Paul's Bank; in the sea between are from 22 to 27 fathoms, with regular soundings inward to 3 and 2 fathoms; but there is a rock of 9 feet, in the middle of the bay, on each side of which are 5 and 6 fathoms. In this bay, at about W.S.W. $\frac{1}{2}$ W. from the south part of St. Paul's Bank, is a valley, having a very fine spring of water, from which 20 tons may be procured every day.

The Bays of MELHEHA and St. PAUL are divided by the peninsula of Salmona, on the elevated part of which is the *Salmona Palace*, a remarkable square edifice; and, at the extremity of this peninsula, is the low and irregular islet called Salmonetta, which forms the north side of St. Paul's Bay. At the eastern extremity of this islet, are a few rocks under water, extending outward to about half a cable's length: at a cable's length is clear ground, with 10 to 14 fathoms.

The distance between the eastern end of Salmonetta and Kaura Point is rather more than a mile, and the space between is the entrance of St. Paul's Bay. In this bay, at less than a quarter of a mile to the southward of Salmonetta, and extending a quarter of a mile thence S.S.E., is a bank of rocky and foul ground, on which the least depths are 7 and $6\frac{1}{2}$ fathoms.

On the S.E. of the entrance, within Kaura Point, is the square tower and battery, called those of the *University*. Another battery, *Elbena*, stands on the same side, at three-quarters of a mile farther in; and, at half a mile westward of the latter, is the Tower of St. Paul. Three other batteries defend points of the bay.

The harbour of St. Paul is open to easterly and N.E. winds; it is, notwithstanding, safe for small ships, the ground generally being very good; and, while the cables hold there is no danger, as the anchors will never start. The best anchorage is abreast the small harbour on the starboard hand going in, and in from 10 to 6 fathoms, soft mud and clay. Small ships may haul into the little harbour, and lash together in a tier, having an anchor out to the S.S.E., and no winds can hurt them.

Between

Between *St. Paul's Harbour* and *Valetta*, (about two leagues S.E. $\frac{1}{2}$ S.) the ground is, in general, rocky and bad; though there are spots of clear ground. With the two towers of *St. Paul's Bay* in a line, W. $\frac{1}{2}$ S.; *St. George's Tower*, S. by W.; and the extremes of the land of *Gozo* and *Malta*, from N.W. to S.S.E. in 32 fathoms, with coarse sand, is the safest spot for anchoring, and the clearest ground.

At half a league S. $\frac{1}{2}$ E. [*S.S.E.*] from the above-mentioned spot, and at rather more than half a mile from shore, is the west end of *St. George's Shoal*, a rocky bank, extending thence a mile to the south-eastward. The depths over it are from 4 to 7 fathoms; and it lies directly off the little port of *St. George*, distinguished by the tower already noticed. Eastward of this port, at less than one quarter of a mile from shore, is the *Spinola Reef*, lying off the entrance of *St. Julian's Bay*, off which anchorage may be found, but it is all in patches. Half a league south-eastward from *St. Julian's Bay* is the round tower of *St. Elmo*, or *Valetta lighthouse*.

VALETTA.—*MARSA MUSCEIT* and the *PORTO GRANDE*, or Great Port of *Valetta*, are, as already noticed, separated by a rocky peninsula, or tongue of land, on which stands the city, with its suburb *Floriana*. At the extremity is the lighthouse, on *Fort St. Elmo*, which serves to defend the entrance into both ports. On the south side of the Great Port are two other peninsulas of rock, pointing towards *Valetta*, and forming inlets, which serve as excellent harbours. On the first of these is the Castle of *St. Angelo* and town of *Vittorioso*; on the second the town of *Isola* or *Sanglea*; and southward of both is that of *Burmola*, surrounded by the fortification called the *Cotonera*.

The inlet on the eastern side of *Vittorioso* is the *Porto della Renella*; that between *Vittorioso* and *Sanglea*, *Port della Galera*, the *Galley Port*; that on the west of *Sanglea*, *Porto dell' Isola Sanglea*, or Port of the Isle *Sanglea*.

The promontory which forms the north side of *MARSA MUSCEIT*, as *St. Elmo* and *Valetta* form the south side, is named *Point Dragut*, and exhibits, on its extremity, *Fort Tigné*, which defends that harbour. Over the south point of the entrance to the *GRAND PORT*, (*Punta del Orsa*.) is the more extensive fort *Ricasoli*.

The first stone of the present capital, *Valetta*, was laid by the renowned Grand Master *La Valette*, in 1566. Although built on irregular and broken ground, it is extremely handsome. The houses are low; but they have all one or more balconies for walking on. The streets are wide, generally at right angles to each other, with commodious foot-paths on each side; they are paved with flat square stones, and are so free from mud, that even during winter the feet remain perfectly dry. The city has three gates, and the principal street reaches from the castle of *St. Elmo* to the Royal Gate on the S.W. Besides private cisterns to every house, there are also public ones, together with a fountain, the source of which is in the southern part of the island, from which the water is conveyed by an aqueduct. When the winter rains are not sufficient to fill the cisterns, this affords a constant supply.

The houses are neat, built of stone; the roofs form a flat terrace plastered with *pozalana*, with pipes conducting to the cisterns, so that all the rain water is preserved. The church of *St. John*, on the S.W. side of the city, is one of its principal ornaments, and *St. John's day* is one of its highest festivals.

The approach to the harbour of *Valetta* is exceedingly picturesque and interesting; and the fortifications, close to which every ship has to pass, seem sufficient to annihilate the most powerful naval force that could be brought against it. In coming from the eastward and northward, as you approach, you will see the round light-tower of *St. Elmo*, standing over the point between the two harbours, and which, at first, appears like a sail. You will also see white cliffs, with a white church, near the S.E. end of the island.

Without the harbour, off *Valetta*, is very deep water, but fine soft mud and clay; depths from 80 to 60 fathoms.

The HARBOUR of VALETTA is large, safe, and commodious. The entrance is no more than 250 fathoms wide. Two warping buoys lie without the entrance, between which is the fair channel for the largest ships. From the point of *St. Elmo* there is a little foul ground, to the distance of 50 fathoms, and a spit stretches thence eastward about 170 fathoms, having over it from 4 to 7 $\frac{1}{2}$ fathoms. The extremity of the shoaler part is indicated by a can-buoy, within which, in a heavy sea, a line-of-battle ship would strike.

There

There is also a small reef, of 17 feet, on the eastern side of the entrance, which extends about 20 or 30 fathoms from *Punta del Orsa*. It has 5 fathoms close to it.

The leading mark in is, the stone sentry-box on Point Sanglea open to the southward of the whole of the Valetta side. Should the wind be scant, or out of the harbour, you may anchor any way off the entrance, in 15 to 20 fathoms, and warp in. The entrance is so narrow, and the wind, in general, so variable, without the harbour, as renders it not advisable to attempt to turn in. It may be proper for strangers to take a pilot; as one may always be obtained, on making the usual signal when off the harbour.

In sailing in, keep nearest to the western shore, as it is bold-to, and not subject to sudden gusts of wind, like the opposite shore. The best anchorage is all along the same shore, from the Pratique Office upwards to Floriana, with one anchor to the southward and a fast on shore.

There is good anchorage in *Bighi Bay*, the first bay within Fort Ricasoli, in the summer months; but, as it is exposed to the north winds, which send in a very heavy sea, it would not be advisable to lay there in winter. In the middle of the harbour, off this place, is a warping buoy.

The best anchorage for men-of-war is above Sanglea Point, in the Inner Harbour, with that point bearing East, and the dome of Floriana church N.W., or N.W. by N., in 10 or 11 fathoms of water. Moor with the small bower to the N.W. and the best bower to the S.E., so as to have an open hawse with the wind in.

Water may be had in any quantity. You fill it in boats, with a hose alongside the wharf, from pipes laid down for the purpose. Wood may be purchased, but it is very dear, as most of it is brought from Sicily.*

It is no less curious than amusing to view the diversities of dress and appearance among the motley crowd which business daily assembles on the marina of Valetta. Besides the English soldiers, sailors, and merchants, many of whom have their warehouses there, one sees Barbaresque traders, wrapt in their long shawls and peculiar habiliments, whose settled gravity is contrasted with the noise of the Maltese boatmen and porters, a lively set of people, having much more of the Italian than of the African character, although some of them evidently appear to be of the latter origin. There are, also, about the harbour, some Maltese of a superior class, such as the port-captains, the officers of the *sanità*, and others, who imitate the English, but may be readily known as Maltese by their swarthy countenance, &c.

MARSA MUSCEIT, the harbour on the N.W. side of Valetta, is made use of for ships to perform their quarantine in. Manuel Island, on its western side, has a fort and Lazaretto upon it; the latter being on the south side of the island. The entrance of this harbour, defended by *Fort Tigné*, is only 150 fathoms wide, and there is a narrow reef, of 2 and 2½ fathoms, around Point Dragut, on the north side. To avoid the reef, on entering, keep Fort Ricasoli open of Point St. Elmo until you open Fort Manuel or the Lazaretto Island: then, if the wind be fair, steer in for the S.E. point of that island, or keep in mid-channel, passing a warping buoy, which lies in the entrance. The star-board side, in going in, is generally steep-to, but some shoal spots stretch off from the larboard side.

If the wind be scant, or out of the harbour, anchor off the entrance in 14 or 15 fathoms of water, and warp in. Guns or stones are fixed all along both sides, to which hawsers may be made fast. The best anchorage is above Lazaretto Island. Moor with the best bower to the eastward, and the small bower to the westward. There is not width to moor athwart the harbour with more than half a cable each way. Merchantmen moor with an anchor a-head and stern-fasts on shore. There is a watering place on the Valetta side, nearly opposite the lazaretto, for the ships in quarantine. The Pratique Office is on the point opposite to Fort Manuel.

To the SOUTH-EASTWARD of VALETTA, without the harbour, the ground is pretty good, in from 40 to 22 fathoms; but off the little harbour called *Marsa Scala*, at the east end of the island, the bottom is rocky, and between this and Marsa Scirocco there is no safe anchorage.

* For the REGULATIONS of TRADE and of QUARANTINE in the Port of Valetta, see the APPENDIX which concludes this work.

At E. $\frac{1}{2}$ S. from Valetta there is good ground in about 58 fathoms of water, on muddy bottom; also off Marsa Scala, in from 35 to 60 fathoms.*

On the south side of the entrance of Marsa Scala is the castle or fort of St. Thomas. The coast thence forms a small bay, to the S.E., terminating with the white cliff. From the cliff a reef extends due East (by compass) two miles, and is one quarter of a mile in breadth. The depths over it are from 5 feet to 9 fathoms, and it is steep-to on both sides, having 17 fathoms close to it, and at the next east shore. The marks for it are, a windmill, the only one in sight, on with the south end of a house behind which it stands: this is the thwart mark, shewing the lateral direction of the reef. The long mark for the outer extremity of the shoal is a little square house on the side of a hill, bearing N.W. on with the southernmost of three towers which appear nearly in a triangle, when in that direction.

Ships coming round from the eastward for Valetta should give a wide berth to this shoal.

MARSA SCIROCCO.—*Benhisa Reef*, a dangerous shoal, lies off *Point Benhisa*, the S.E. point of Malta. To the northward of this reef and the point is the bay called **MARSA SCIROCCO**. This bay is formed on the east by an elevated peninsula, named *Vermia*, which terminates with *Point della Mare*, at the foot of which is an islet, *Limace*, and some rocks, *Itactia*, all bordered with a rocky shoal. Benhisa Point bears W. by S. a mile from Point della Mare, and is distinguished by a square tower. Della Mare has also a square tower and a battery.

Seated on a broad promontory, directly facing the mouth of the harbour, is the square castle of St. Lucian, which, bearing N. by W. [*N.N.W. $\frac{1}{2}$ W.*] forms an excellent mark for the mid-channel, into and out of the harbour, between the shoals on either side.

From the square tower on Benhisa Point the outer end of Benhisa Reef bears S.S.E. $\frac{1}{4}$ E. [*S.E.*] one mile. The depths over the reef are from 3 to 9 fathoms. The depths around it are from 10 to 20 fathoms.

This reef is rugged and uneven. The thwart mark is Zeitun church (with two spires and a cupola) bearing N. by W. and on with the N.E. end of the castle of St. Lucian. The outer end lies with a broken-headed tower, bearing N.N.E. on with the Tower del Mare, which stands on the eastern point of the harbour.

In entering the harbour from the N.E., do not shut in these marks with each other; and on approaching from the S.W. keep the last or long mark well open until Zeitun church is a sail's breadth to the northward of St. Lucian's Castle, which will carry you clear.

MARSA SCIROCCO is a very safe harbour, except with southerly winds, and even they seldom blow home. The bottom, in general, is good holding ground, with from 5 to 15 fathoms. The N.E. side is the safest for any ship to anchor on. Line of battle ships may anchor outside, in any place to the north-eastward of the shoal, or at about half a mile from it, where there is a depth of 20 to 22 fathoms.

Benhisa Point is shelving, and this renders the passage between it and the reef not safe for large ships, there being only between 3 and 4 fathoms of water at a cable's length from the point. No man-of-war should take this passage unless in a case of necessity, (which can rarely happen,) and should then borrow nearer the outer shoal than the point; not drawing towards the point under 6 fathoms. The Reef keeps off much of a sea with a southerly wind.

SOUTH COAST.—There is no good anchorage on the South and S.W. sides of Malta; and, at any distance off, there are 100 fathoms of water and upwards, all the coast being steep-to, with exceedingly high and rugged cliffs, as already described.

At half a league from the middle of the South coast is a remarkable islet named *Filfolà*. It is a high rock, a mile in length, from East to West, and having, at its west end, the two smaller rocks of *Santa Maria*. Between it and Malta the depths are from 27 to 37 fathoms. The tide hereabout is scarcely perceptible, but the current is mostly to the southward and eastward.

* **HURD'S BANK.**—At $3\frac{1}{2}$ leagues E. by S. [*E. $\frac{1}{2}$ N.*] from Valetta lighthouse, is the south end of a bank, surveyed and named, by Captain Smyth, *Hurd's Bank*. It extends true N.N.E. and S.S.W. more than three miles, and is generally one mile in breadth. The southern part is rocky, and has over it from 27 to 31 fathoms of water. The northern part, of gravel, has from 17 to 40 fathoms.

THE ISLANDS LINOSA, LAMPEDUSA, AND LAMPION.

LINOSA.—The uninhabited isle Linosa (ant. *Algusa*) lies at about 67 miles S.S.E. [S.E. $\frac{1}{2}$ S.] from Pantellaria, (described on page 163), and 60 miles W. $\frac{1}{2}$ N. [*W. by S.*] from Cape St. Demetri, the N.W. extremity of Gozo. This island, with Lampedusa and Lampion, constituted the *Pelagic Isles* of the antients. Linosa is of an irregular quadrilateral shape, about 6 miles in circuit, entirely volcanic, with an extinct crater within half a mile from its N.E. side, and three others more to the southward. The fires of these, Captain Smyth has observed, must have been very intense, as pumices and the most perfect and obdurate vitrifications occur amongst the lavas. There are three hilly ranges, with good valleys between them, covered with a spontaneous and varied vegetation, evincing, by a rich luxuriance of growth, the capability of the soil. On the western side is a small cove, formed by the falling in of one side of a crater, where boats can very conveniently land on a beach of fine triturated sand. The latitude of this cove is $35^{\circ} 51' 50''$; its longitude $12^{\circ} 52' 9''$. Variation in 1815, $16^{\circ} 42' 40''$ W.

On Captain Smyth's first visit to this isle, the only living creatures found on it were hawks; he, therefore, subsequently put some goats and rabbits on shore, sowed some beans and peas, with several grasses, wheat, barley, tobacco, &c. When last there, the colony had increased prodigiously, but the gardens had been sadly injured by the burrowing of the rabbits.

Linosa is moderately high, and in clear weather may be seen at the distance of 10 or 12 leagues. On making the island from a distance, it has the appearance of two islets; but, on closing, the hills and valleys are raised. The approaches are bold on all sides, carrying from 20 to 10 fathoms, close in, 50 to 60 at the distance of a furlong, and 150 at the distance of less than half a mile. The S.E. point (*Strepto*) is high and bluff; the S.W. (*Sciara*) low and craggy. The bottom on the east and west sides is of black sand.

The sea between Pantellaria and Linosa, also thence to Malta and to Lampedusa, is without bottom at the depth of 300 fathoms.

LAMPEDUSA, the antient *LOPADUSA*, now a dependency of Sicily, lies at the distance of 24 miles S.W. $\frac{1}{2}$ W. [*S.W. by S.*] from Linosa. This island is 6 miles in length, true East and West, by the medium breadth of half a league. Its surface is level, but its coast is abrupt and craggy, except on the S.E., where it shelves from a height of nearly 400 feet to a low shore, indented, or rather serrated, with many coves.

This island is not regularly inhabited, though an attempt to establish a settlement on it has been made by a Mr. Fernandez, whose family is living (or not long ago was living) upon it, in almost deserted solitude, attended by a few Maltese peasants. The farm is upon a small harbour on the south side, at the distance of half a league from the S.E. point of the island. From this harbour, a stout wall, erected by Mr. Fernandez, extends, in a N.W. direction, to the opposite coast, entirely separating the broadest part of its eastern end, which is under cultivation, from the rest of the island. The western parts are covered with dwarf olives, and a great variety of plants, so that a good deal of fire-wood has been cut and sent hence to Tripoli and Malta. In this part of the island are plenty of wild goats. The Numidian crane visits the island in great numbers, in the month of May, and has proved to the farm a very destructive enemy.

The north coast of Lampedusa is very steep-to, having 35 and 40 fathoms within 400 yards of the shore; but from the south side extends a bank, having over it from 15 to 50 fathoms. Here good anchorage may be found, by bringing an old tower on the island to bear N.E. $\frac{1}{2}$ E. [*N.E. by N.*] where you may find 17 or 18 fathoms of water, with gravelly sand: but there are hereabout two or three spots that may chafe the cable; so that an iron chain, if one on board, had better be let go.

If it be requisite to enter the harbour, and the wind leads, it is best to anchor on the bearing above given, and then warp in, there not being room to work. The rocks of the harbour have been cut to receive the fasts of small vessels, and offer facility to the carrying out of hawsers.

The harbour is a cove, in which vessels of 300 and 400 tons may find excellent shelter from every wind: the most inconvenient is that from S.S.W., which causes a grown swell.

swell. There is depth sufficient, but scarcely room to moor a frigate, unless by fasts to the shore.

The west point of the entrance of the harbour is called *Wilgia Point*; the east point *Cavallo Bianco*. On a projecting low point facing the entrance, are the remains of an old tower or castle. The best berth is in $5\frac{1}{2}$ fathoms, opposite the low rocky point, running into the harbour, with Wilgia Point bearing W.S.W. $\frac{1}{2}$ W.; the patch of Cavallo Bianco, S. by W. $\frac{1}{2}$ W.; and the Castle, N.E. by N. The upper part of the harbour forms three shallow sandy coves. The landing-place is a little creek in the point, on which stand the castle, with a little chapel, a store-house, &c.

CAPE PONENTE, the west cape of Lampedusa, is a steep, picturesque, and perpendicular, cliff, which may be rounded by any ship at the distance of a furlong. On the south side of the island, at $2\frac{1}{2}$ miles from this cape, are an islet and two rocks, the *Rabbit* and *Coneys*, which lie exactly half way between the cape and harbour. The larger Coney is moderately high, but the western very low, and this appears so exact a continuation of the white cliffs of Lampedusa, that it is difficult to make it out in passing; but all is bold-to. You may keep the shore on board all the way from Cape Ponente to Wilgia Point, excepting off the Rabbit and Coneys, which should be approached with caution.

LAMPION.—At 8 miles N.W. by W. [*W.N.W. $\frac{1}{2}$ W.*] from Cape Ponente, the west end of Lampedusa, is the steep, tabled, and triangular, rock, called *Lampion*. This islet is not above 400 fathoms in length, from North to South, by about 100 in breadth. Its surface is so flat, that, on making it from the N.W. it looks like a wall, and yet there are vestiges of buildings on its summit, of an antient date. It is quite steep on its West, N.E. and S.W. sides, in cliffs of from 120 to 140 feet high, shelving down on its eastern side to a low point, much frequented by seals. All sides of it are bold-to, with 10 to 20 fathoms close in, excepting at the Seal Point, whence a shoal tails off to the distance of about a furlong. In the sea around, the depths are from 20 to 50 fathoms. The position of this islet is, lat. $35^{\circ} 32' 50''$, long. $12^{\circ} 19' 50''$. Variation, in 1822, $15^{\circ} 30' W$.

X. The COAST of BARBARY, from TETUAN to TRIPOLI, inclusive.

HAVING described in our first section, pages 5 to 9, the AFRICAN COAST, from Tangier to Tetuan, we shall now proceed with the coast thence EASTWARD.

TETUAN BAY, as already shown, (page 8,) lies between Cape Negro and Cape Tetuan (pr. *Tetawan*); these capes are nearly three leagues asunder, and on each is a watch-tower: near the middle of the Bay, at the entrance of Tetuan River, is a square castle, about 30 feet high, with a few guns mounted on it.

The ground about Cape Negro is foul, and there are several rocks above water near the cape; therefore ships from the northward, even with a westerly wind, should give it a berth of, at least, half a mile. There are several spots of foul ground in the bay, particularly to the southward, but there is good anchorage on sandy ground with the castle bearing N.W. by W. $\frac{1}{2}$ W. [*W. $\frac{1}{2}$ N.*] about half a league from shore, with Gibraltar appearing, near the top, on the western declivity of Ceuta. Here you will find from 15 to 17 fathoms of water. At a little farther to the northward, with the latter mark on, are 14 and 13 fathoms. There are 4 and 5 fathoms within three cables' length of the castle, but the ground is not good.

Ships lying in Tetuan Bay should weigh on the first appearance of an easterly wind, which mostly sends in a swell before it blows home; for the ground is loose, and not to be depended on, with a wind on shore. In the river the tide, on the full and change, rises 5 feet, and it is high water at $1\frac{1}{2}$ h. Good water may be had near the custom-house; or to the southward, from a rivulet south-eastward of the cape, as noticed on page 8.

With the wind from N.W., West, or S.W., vessels may anchor very well in the Bay of Tetuan. On steering to the South, from Cape Negro, clean bottom may be found so soon as the city of Tetuan is in sight: this city appears white, and is about 4 miles from the coast.

Especial precautions must be taken against an *easterly wind*, in the winter season ; as it sometimes comes on suddenly, with a high sea ; on its first indication, therefore, vessels must, without loss of time, get under way ; for, if they remain at anchor, they run the risk of being stranded, because the swell and revolving currents do not, at times, allow them to weather the *Almina* or *Ceuta Point*.

From TETUAN BAY, the coast of Morocco extends eastward, about 57 leagues, where it is bounded by the *River Muluwia*.* The country between is inhabited mostly by Arabs ; there is no town of any consequence upon the coast, and it is equally destitute of harbours. Its western part is fruitful ; its eastern, variegated and barren, bordering on desert. Twenty-five leagues of coast from Cape Tetuan eastward are comprised in the province of *Errife*, a territory which produces corn and cattle in abundance ; that part of it contiguous to Tetuan produces delicious oranges ; also figs, grapes, melons, apricots, plums, strawberries, apples, pears, pomegranates, citrons, lemons, limes, and the refreshing fruit of the *opuntia*, or prickly pear, called by the Arabs *Kermuse Ensarrak* or Christian fig. The only river of any consequence is the Muluwia, above mentioned, and this is a deep and impetuous stream, impassable in *Liali*, the period between the 20th of December and 30th of January inclusive, or the forty shortest days, as computed by the old style. In summer, however, it is not only fordable, but often quite dry. The Muluwia falls into the sea in latitude $35^{\circ} 5'$ and longitude $2^{\circ} 14' W$.

The *Peñon de Belis*, by the Spaniards pronounced *Veliz* or *Velez*, is an elevated islet of rock, belonging to Spain, and surmounted by a fort. It stands at the distance of 22 leagues S.S.E. $\frac{1}{2}$ E. [*S.E. $\frac{1}{2}$ E.*] from the Almina or Ceuta Point. Here, on the coast, is *Belis de Gomaira*, a Moorish town, situated between two mountains ; at the bottom of which was antiently a city called *Bedis*, supposed to have been founded by the Carthagenians. In the neighbourhood of this place are forests of excellent timber, with which the Moors, before the Spaniards obtained possession of the *Peñon*, built fishing vessels. A small bay, not far to the eastward of the *Peñon*, or Rock, is said to afford good shelter, on its eastern side, from East and E.N.E. winds, and on its western side from westerly winds. This bay may be easily known : the west point being round and covered with trees : the east point is about two miles distant from it.

At eight leagues to the eastward of the *Peñon de Belis* is the *Peñon de Albuzema*, or *Garrison Rock*, another Spanish post, before the mouth of the *Mocor* rivulet, and commanding the Moorish town *Al Buzema* : the bay here is quite exposed to northerly winds ; but the ground is very good, and there is no danger of bringing home the anchors.

CAPE TRES FORCAS.—In latitude $35^{\circ} 27' 55''$, and longitude $2^{\circ} 57' 25'' W$., is the extremity of the great promontory called *Cape Tres Forcas* or *Cape Three Points*, above which is a watch-tower. The bearing and distance of this cape from *Ceuta* are S.E. $\frac{3}{4}$ E. [*E.S.E. $\frac{3}{4}$ E.*] 116 miles ; and from the *Peñon de Buzema*, E. $\frac{3}{4}$ S. [*E.N.E. $\frac{3}{4}$ E.*] 42 miles. The ground near the cape is foul, and there are several rocks near it above the water. You may pass in at the distance of a gun-shot, but here is no anchorage.

MELILLA.—On the eastern coast of Cape Tres Forcas, at $9\frac{3}{4}$ miles southward from the extremity of the cape, is the town and fortress of *Melilla*, [ant. *Russadirium*,] which have been held by the Spaniards from about the beginning of the fifteenth century. The country in the vicinity abounds with wax and honey ; the latter is equal to that of Minorca, and when kept a year is nearly as hard and white as loaf-sugar. Melilla stands on an islet connected to the main by a bridge. It has a harbour for small vessels, within two moles, and a good roadstead without for larger.†

The

* In some charts we find this river under the name of *Mahala* : in others, *Moulonia* and *Milonia*.

† MELILLA is one of the four fortresses still possessed by the Spaniards on the coast of Barbary ; the others being *Ceuta*, the *Peñon* (or Rock) of *Belis Gomaira*, (or *Velez Gomera*), and *Al Buzema* ; both the latter are situated on rocky islets, in the immediate proximity of the African shore. The whole of these are called *Presidios*, in consequence of their being the places to which the *Presidarios* (persons condemned to slavery) are sent to expiate their offences, by labouring in chains on the fortifications and other government works.

Melilla, situated on a promontory, is said to contain about 8000 souls, including troops, inhabitants, and slaves. It may be considered in a state of constant seige ; as the Moors in its vicinity are

The ZAPHRAN or ZAFFARINE ISLANDS are three small isles lying 10 leagues S.E. $\frac{1}{2}$ S. [S.E. by E. $\frac{1}{2}$ E.] from Cape Tres Forcas, and were surveyed, many years ago, by Captain Wm. Wolesey, R.N. They cover an extent, from East to West, of a mile and a quarter only, but within them there is good shelter from northerly, easterly, and N.W. winds. On the central isle wells were dug and water found. H. M. ship *Trusty* anchored at a quarter of a mile to the west of the eastern isle, in 9 fathoms, bottom of stiff clay. The soundings generally are 6 to 10 fathoms. From the nearest point of the main, *Zaphran Point*, to the southward, the isles are half a league distant.

There are passages between these isles, but they are very narrow, and, in the middle of the entrance of the western passage, is a rock on which there is only 10 feet of water; for which reason ships should never use it. The entrance between the islands and the main, either to the eastward or westward, is very good; the soundings are regular, and shoalen gradually as you approach the main. At two cables' length from the shore you will have from 4 to 6 fathoms, and at a cable's length from the islands you will have from 9 to 12 fathoms, grass and muddy bottom. The westernmost island is the highest, and may be seen 8 or 10 leagues off; its top appears like the crown of a hat. The tide rises very little here, and seems to depend chiefly on prevalent winds. The best anchorage is off the middle island, at the distance of a cable's length, in 8 or 9 fathoms; the bottom is of stiff clay, from which an anchor will hardly ever start; the south point of the easternmost island will bear about E.S.E., and the south point of the westernmost island about W. by N. These islands lying in a deep bay, between *Cape Tres Forcas* and *Cape Guardia*, are so much out of the general track of navigation, that they are little frequented, though they afford a good retreat to ships in stormy weather. To leeward of these islands you may land in moderate weather; but, as the coast is uninhabited, barren, and rocky, neither provisions, refreshments, wood, nor water, can be procured. Fish is to be caught here in small quantities. These islands are situate in $35^{\circ} 12' N.$ and $2^{\circ} 23' W.$ The entrance of the *River Muluwia*, or *Mahala*, already noticed, is 10 miles to the south-eastward from these isles.

From the *Muluwia* eastward, the coast to a great extent is uninteresting, being mostly in a wild state. At 4 leagues E. $\frac{1}{2}$ N. [N.E. by E. $\frac{1}{2}$ E.] from the *Muluwia* is *Cape Hunyham*, or *Cape Hone*; the coast between is nearly straight, but it thence becomes more irregular, and different points of land succeed each other, as follow:

	Magnetic.	True.	Miles.
Cape Hunyham to Cape Guardia	E. $\frac{1}{2}$ N.	— N.E. by E. $\frac{1}{2}$ E.	— 18
Cape Guardia to the Karakal Islets	E. $\frac{3}{4}$ N.	— N.E. by E. $\frac{1}{2}$ E.	— 8
Karakal Islets to Cape Figali	E. $\frac{1}{2}$ N.	— N.E. by E. $\frac{1}{2}$ E.	— 21
Cape Figali to Cape Sigale	N.E. $\frac{1}{4}$ N.	— N. by E. $\frac{1}{2}$ E.	— 10
Cape Sigale to Cape Falcon, or Ras al Harshfah	E. by N.	— N.E. by E. $\frac{1}{4}$ E.	— 16
Ras al Harshfah to Point Rosso	S.E. by E. $\frac{1}{2}$ E.	— E. $\frac{1}{2}$ S.	— 14
Point Rosso to Point Abuja	E.N.E. $\frac{1}{4}$ E.	— N.E. $\frac{1}{2}$ E.	— 8
Point Abuja to Cape Ferrat, or Ras al Mishaf	E. $\frac{1}{4}$ N.	— E.N.E.	— 8

Off *Cape Figali* is a little rocky islet, named *Ishgoon*; off *Cape Sigale* is a similar one, *Habeeba*; the last is two miles from shore, and there is no danger between it and the land but what is visible, so that the passage may safely taken. Water may be obtained here, and there is good anchorage, according to the wind. The shore about *Cape Falcon* is foul, as are *Point Abuja* and *Cape Ferrat*.

ORAN.—BAY OF ORAN.—At two leagues to the south-eastward of *Cape Falcon* is *MARSA-KIBBEER*, or the BAY OF ORAN, on the west side of which is a good roadstead, capable of holding a large fleet, and having from 12 to 9 fathoms of water, with good ground, sheltered from all winds. On the S.E. side of the bay are the remains of the town of *Oran* or *Waharan*, which was nearly destroyed by an earthquake in 1790: this town was then in possession of Spain, but was subsequently abandoned. Two elevated

are exceedingly savage and daring, always ready to take advantage of any person who may, for an instant, be exposed, and who, by their long muskets, may be picked off.

The supplies for *Melilla* are sent from *Malaga*; and between these places there is, nominally, a regular packet; but it has, at times, been so delayed as to reduce the whole population to distress.

mountains,

mountains, surmounted by forts, on the west of Oran, bearing S.W. by S., form an excellent mark for entering.

CAPE FERRAT may be easily known by a rock lying directly off it, which resembles a church-steeple. From this cape the coast trends 7 miles to the south-eastward, towards the Bay called that of *Arzeo*, and the shore is steep-to, there being from 20 to 12 fathoms, at the distance of a quarter of a mile from shore. Off the point of *Arzeo* is a small islet.

ARZEO.—*The following description of Arzeo is from the pen of an officer of rank, and was obligingly communicated in 1817.* “When off *Arzeo Point* you will see a rock to the S.E., which appears like a boat, within which is the bay. The best anchorage is with the South Rock E.N.E., and the Granary, which is at the bottom of the bay, W. by N. in from 10 to 5 fathoms, sandy bottom, about 2 or 3 cables’ length from the shore; the soundings are regular, and shoalen gradually as you advance near the shore; the greatest part of this bay is bounded by a sandy beach, with large clots of sea-weed which may be mistaken for rocks. The bay is open to Easterly and N.E. winds, which occasion a great swell: it is the best part of the coast hereabout, yet not more than 10 or 12 ships can ride in it with safety, the bay being very small.

“There are no fortifications here, and a boat may land in any part of the bay. Corn and cattle are, at times, exported hence in foreign bottoms; the corn is brought from the adjacent parts, and deposited in the Granary, which is mentioned as a mark for the anchorage, and which is the only building in sight from the anchoring-place. Wax and oil are also exported from this place. As the country produces corn and cattle, it is to be presumed that refreshments may be had if wanted. The country appears fertile, and many trees are on the coast, therefore it may be equally presumed that both wood and water may be procured here. The plague raging in this part during our stay prevented our landing, or having any communication with the inhabitants; numbers of whom came down to the beach armed with muskets, and with flags flying, on the approach of our ship, making a great noise, and blowing horns, as we supposed, to alarm the country. The current was running to the westward and northward round the bay. As there are no shoals nor rocks under water, there is no occasion for a pilot here.”

ARZEO or ARZEU to ALGIER.—Between the Bay of *Arzeo* and that of *Algier*, a distance of not less than 57 leagues, the coast is, in many parts, rocky and precipitous, and generally bold-to: there being mostly soundings of 50 and 60 fathoms, at a short distance from shore, and, at two leagues out from 190 to 200 fathoms. The principal headlands, with their bearings, &c. from each other, are as follow:

	Magnetic.	True.	Miles.
Cape Ferrat to Point Mustagennan	E.S.E. $\frac{3}{4}$ E. —	E. $\frac{1}{2}$ N. —	20
———— Cape Kulmeta or Mostagan	E. by N. —	N.E. by E. $\frac{1}{4}$ E. —	42
Cape Kulmeta to Palomas Isle	E. $\frac{1}{2}$ N. —	E.N.E. —	23
Palomas Isle to Cape Nakkous, or Cape Tenez	E. $\frac{1}{4}$ N. —	E.N.E. —	23
Cape Nakkous to Raz Wahryah	E.S.E. $\frac{3}{4}$ E. —	E. $\frac{1}{4}$ N. —	14
Ras Wahryah to Point Zerzahal	E.S.E. $\frac{3}{4}$ E. —	E. $\frac{1}{2}$ N. —	20
Point Zerzahal to Ras al Hamous	E. $\frac{1}{4}$ S. —	E.N.E. $\frac{1}{2}$ E. —	14
Ras al Hamous to Marsa Ganib	E.S.E. $\frac{1}{2}$ E. —	East, n.ly. —	14
Marsa Ganib to Sidi el Ferruch	E. $\frac{1}{4}$ S. —	E.N.E. $\frac{1}{2}$ E. —	10
Sidi el Ferruch to Sidi Halif	N.E. $\frac{3}{4}$ E. —	N.E. by N. —	7
Sidi Halif to Ras Akkonadda	E. $\frac{1}{2}$ N. —	N.E. by E. $\frac{3}{4}$ E. —	3 $\frac{1}{2}$
Ras Akkonadda to Point Pescada	E. $\frac{1}{2}$ N. —	N.E. by E. $\frac{3}{4}$ E. —	3 $\frac{1}{2}$
Point Pescada to Cape Matifou, or Temendfust	E.S.E. $\frac{1}{4}$ E. —	East. —	12 $\frac{1}{2}$

The little town of *Mostagan* or *Marzagan*, which is two leagues to the southward of Cape Kulmeta, on the west, was once a place of some consideration; but, like many other towns of this coast, has sunk into insignificance: beyond the same cape, on the east, is the remarkable high land named *Jibbel Iddis* or *Cape Ivi*. The little isle, *Palomas* or *Columbi* (Pigcon Isle) lies off the Point called *Cape Gileto*, and there may probably be a passage between it and the main.

Cape Nakkous or *Tenez* is the most remarkable cape hereabout, and the shore to this promontory, from *Cape Ferrat*, is sandy and barren. The town, or rather village, of *Tenez* is about two leagues to the S.W. of the cape, and between are some rocks above water,

water, near the shore : but there is shelter in the road before the town, from southerly, easterly, and E.N.E. winds, though quite exposed to all others. The best anchorage is in from 7 to 9 fathoms, with a saddle hill bearing about S.S.E.

Zerzahal or *Sarzel* is a little old town and castle at the foot of a mountain, on the S.W. of the point *Zerzahal* above-mentioned. *Tefessad* is a village about 5 miles to the south-eastward of *Ras al Hamous* or *Amoosh*, and off it is good anchorage, sheltered from the west. Cape *Zerzahal* is high, with flat table land for its summit, and appears at a distance like an island.

In the Cove of Sidi el Ferruch, (or *Seedy el Fereuch*,) which may be considered as the mercantile port of the Algerine capital, the French troops made their landing, previous to the capture of Algier, in June, 1830. This place is protected on the north by a point of land, formed of calcareous rock, on which is a battery, and a santon or Turkish convent, to which the Spaniards imparted the name *Torre Chica*, (*Touretta* or *Little Tower*.) Here the fleet anchored, and proved the roadstead to be an unexpected safeguard to the expedition, though exposed to winds from the West to W. by N.; the bottom good holding ground; and the ships rode safely upon their chain cables. At this port the Algerine government were wont to ship the native produce, especially cattle, for the coasts of Spain and other European ports.

The aspect of the land, in advance of the peninsula of *Torre Chica*, is sandy and slightly undulated; thick bushes cover the surface. In the vicinity abundance of fresh water may be obtained.

The *Ras*, or Cape, *Akkonadda* is the headland commonly called *Cape Cazine*; at a small distance eastward of this is the *Mers el Dhabanne*, or Port of Flies; at 3 miles eastward of the latter is Point *Pescada*, with its battery; to the southward of which, at the distance of a league, is the Port of Algier.

The high land of the interior, in a line between *Torre Chica* and Algier, is the *Mount Boujareah*, on the summit of which, at 150 metres, or 492 feet English, above the sea, is a signal-post.

ALGIER.—The BAY of ALGIER is formed by *Point Pescada* on the west, and *Cape Matafuz* or *Matifou* on the east; these points bear from each other, as shown in the preceding statement, nearly true East and West, 4 leagues distant, and the Bay, from North to South, is more than two leagues deep. At the bottom of the bay is the *Saffaron* or *Haratch River*, and on the western side is the city of *Algier*, with its mole, forts, lighthouse, &c. The last stands upon the mole, in latitude $36^{\circ} 48'$, and longitude $3^{\circ} 1' E$.

It is almost superfluous to say that the city of ALGIER is a place of considerable strength: it stands like an amphitheatre, forming a triangle, near the harbour; the lines of houses, which appear one above another, are of a delicate whiteness, which produces a fine effect, when viewed from the sea. The pier or mole, which is 500 paces in length, extends from the continent to a small island, on which there is a strong castle, and formidable batteries. The houses have terraced roofs, and form gardens, on which the inhabitants recline in slothful indulgence. There are six gates, but no public places nor squares of any extent; the chief public buildings are seven mosques and the palace. The harbour, formed by the mole, is small, shallow, and insecure; and its entrance is impeded by rocks. The number of inhabitants has been estimated at from 80,000 to 120,000. The citadel, (*cassaubah*,) which is of an octagonal form, having port-holes and embrasures in view, is erected on the most elevated ground within the walls, toward the S.W. On the west the whole city is overlooked by a range of high hills, upon which stand two forts, commanding a considerable part of the bay, but the strongest fortifications are those next the sea. There is only one spacious street; all the others are exceedingly narrow and filthy. The palace, in the centre of the city, is handsome; the front is surrounded by two galleries that are supported by marble pillars; and there are two spacious halls, in which the divan formerly assembled on every Sunday, Monday, and Wednesday. The terraced roofs of the houses are so laid that the inhabitants pass over them to visit each other; and they can go over them from one end of the town to the other; as there are ladders for ascending and descending, where they are not of equal height.

On the height to the southward of the town is the *Sultan Kalassy*, or *Emperor's Fort*, which sweeps the Plain of *Babazoune* below, on the east, with the town and new palace called the *Casba*.

The

The country in the neighbourhood is generally healthy, extremely fertile, and beautifully diversified with hills, valleys, gardens, groves, and neat villas, where the most opulent people spend their summer. These villas, as well as the houses in the city, being white and beautifully shaded with fruit trees and evergreens, present the most delightful prospects. The houses of the European consuls, in particular, are finely ornamented with the most beautiful trees and gardens. The soil produces not only the choicest fruits, but is very fertile in corn. The melons have an exquisite flavour; some are ripe in summer, others in winter. The stems of the vines are very large, and the bunches of grapes of a very extraordinary length.*

The base and degenerate character of the Algerines is, unfortunately, too well known to require notice here. The different *castes* are Turks, Moors, a mixture of both, and Jews. The *Cologies* are descendants of Turks by female Moors or natives.

A vessel, having entered the Bay, will have about 40 fathoms of water within the line of the two capes, with a bottom of black clay; the water shoals very gradually as you sail up, to 15 and 10 fathoms near the southern shore, and there is no danger, excepting a few rocks off Cape Matifou, and they mostly show themselves: there are, also, a few about the mole-head. This Bay may be easily known; the land to the eastward of Cape Matifou being covered with *sand-hills*, close to the water-side, while there are *none such to the westward of Algier*, for here it is all an iron-bound coast. Off Point Pescada lie two rocks above water, with a passage between them for small vessels. The horizon kept in sight between these rocks or islets, will lead clear of the rocks near the mole of Algier and directly to the anchorage in the Bay.

To anchor in Algier Bay, you should not approach nearer to the Mole than a mile and a half, though the bay is clear all over; for, should you persist in anchoring nearer, they will stop all communication with you, and keep guard-boats arranged along between you and the shore, in order to prevent a communication with their slaves, and render your situation very troublesome. The best marks for anchoring are, to bring the northernmost land N.W. by N.; the Lighthouse, which stands near the Mole, N.W. $\frac{1}{2}$ W.; the River's mouth South, Cape Matifou East, in 22 or 24 fathoms, sandy bottom, you will then be about $2\frac{1}{2}$ miles from the Mole-head.

Cape Matafuz or Matifou is fortified with a fort or castle at about half a mile southward from the pitch of the cape; this fort is of a hexagon form, having three embrasures on each side, with a ditch and drawbridge; at about 2 miles S.S.W. from this there is a smaller castle, with nine guns, situated on the bay side; and, at about the same distance more up the bay, on the same side, is a battery, with four embrasures in each side of it. On the south shore, at about 3 miles from this battery, towards the town, there is a fort, mounting from six to eight guns. Between the river and the town are several forts and batteries. The Mole is defended by the Lighthouse battery, mounting three tiers of guns; the lower tier, having port-holes, and being under cover, is flanked with fortifications, cut out of the solid rock. The S.W. battery has two tiers of embrasures and guns mounted: all the northernmost tier is of very heavy metal. To the northward of the town-wall, there is a square castle, with a ditch and drawbridge, with several batteries both above and below it. All the batteries to the northward of the town are elevated about 50 or 60 feet above the surface of the sea; all those to the southward of the town are very low, and on the sandy shore. There is no landing-place here but at the Mole.

* The following Remarks were written soon after the capture of Algier in 1830.

"The coast of Algier is not 140 leagues from Toulon and Marseille; a passage which a fleet of ships may accomplish in a week, a single merchant-vessel in three days, a ship of war in fifty hours, and a steam-vessel in less than thirty-six. To France the state of Algier will not be a distant conquest, but a home colony; another France; and a source of incalculable benefit to the mother country.

"The climate of this country, as of Barbary, in general, is soft and salubrious. In July and August only is the temperature oppressively warm, and even then often moderated by northern breezes. Few diseases are peculiar to Barbary; it is rarely visited by the plague, which is not indigenous, but imported by Greek and Turkish vessels from the Levant. The substitution of enlightened quarantine regulations for the blind fatalism of the Mohanmedans, would, doubtless, exclude the plague altogether; while European habits of cleanliness would banish reptiles and vermin from the houses, and the advance of agriculture and civilization would exterminate the beasts of prey in the interior, as it has destroyed the wolves of Great Britain, and the panthers and rattlesnakes of New-York and Pennsylvania."

The

The trade of the place is mostly in corn and wax; that in wax is carried on chiefly by the French to Marseille; the corn trade is carried on under most European flags. When the consul has made a report that one of his Britannic Majesty's ships is anchored in the bay, they fire a salute of 21 guns, which is returned by an equal number. On the consul's coming out to receive the captain, he is saluted with five guns, which is returned by the ship; on the captain's landing he is saluted with five guns, which is also returned by the ship with an equal number, and received by the officer of the war department, and conducted to a place of refreshment on the Mole, where he is served with coffee, &c. &c.

At the back of the town are many fountains and rivulets, which supply the town with excellent water, brought down through a long course of pipes and conduits. The city is called by the Turks *Al-Jezeire el gazie*, or *Algier the warlike*. Hence, in the Declaration of 1816, (1321 of the Hegira,) the Dey is styled, *His most Serene Highness Omar, Bashaw, Dey, and Governor, of the Warlike City and Kingdom of Algier*.

Dr. Shaw, in the relation of his Travels and Residence in Barbary and the Levant, 1738, has said, "During the space of twelve years that I attended the factory of Algier, I found the thermometer twice only contracted to the freezing point; and then the whole country, which was very unusual, was covered with snow; I never knew it rise in sultry weather, unless the winds blew from Sahara. [The Desert.] The seasons of the year insensibly fall into one another, and the great equality in the temperature of this climate appears further from this circumstance, that the barometer shows us all the revolutions of the weather in the space of one inch and $\frac{1}{10}$, or from $29\frac{9}{10}$ to $30\frac{1}{10}$ inches.

"The winds are generally from the sea; that is to say, from the West, by the North, to the East. Those from the East are common at Algier from May to September; and then the westerly winds take place, and become the most frequent. Sometimes, also, particularly about the equinoxes, we very sensibly experience that force and impetuosity which the antients have ascribed to the *Africus* or S.W. wind, here called *La-betch*.

"The winds from the West, the N.W., and the North, are attended with fair weather in summer, and with rain in winter. But the easterly winds (Levanter) no less than the southerly, are, for the most part, dry, though accompanied, in most seasons, with a thick and cloudy atmosphere.

"The barometer rises to $30\frac{1}{10}$ or $30\frac{2}{10}$ inches with a northerly wind, though it be attended with the greatest rains and tempests. But there is nothing constant or regular in easterly or westerly winds: though, for three or four months together, in the summer, whether the winds are from the one or the other quarter, the mercury stands at about 30 inches, without the least variation. With the hot southerly winds it is rarely found higher than $29\frac{1}{10}$, which is, also, the ordinary height in stormy wet weather from the west."

COAST FROM CAPE MATIFOU EASTWARD.—From Cape Matifou (or Matafuz) the coast of Algier continues to be rocky and precipitous, with intervals of beach and sand; and in the interior, as already noticed, are large tracts of desert, about which various tribes may be found, wandering from one place to another, with their flocks and herds, living in tents, and changing their residence according to the state of pasturage. The different Capes and projecting points follow each other in the following order:

	Magnetic.	True.	Miles.
Cape Matifou to Cape Bingut.....	E.S.E. $\frac{3}{4}$ E. —	E. $\frac{1}{2}$ N. —	36
Cape Bingut to Cape Dellyz or Cape Te-delés	E.S.E. $\frac{1}{4}$ E. —	E. $\frac{1}{4}$ N. —	16
Cape Dellyz to Cape Sigli	E.S.E. —	E. $\frac{1}{2}$ S. —	33
Cape Sigli to Cape Carbon	S.E. $\frac{1}{4}$ E. —	E.S.E. —	12
Cape Carbon to Point Jijeli or Zezeli.....	E. by S. —	E. $\frac{3}{4}$ N. —	30
Point Jijeli to Ras al Zhoorah	E. $\frac{3}{4}$ N. —	N.E. by E. $\frac{1}{2}$ E. —	32
Ras al Zhoorah to Ras al Friganah	E. by S. —	E. $\frac{3}{4}$ N. —	6
Ras al Friganah to Ras Hadeed or Cape Ferro	E.S.E. —	E. $\frac{1}{4}$ S. —	33
Ras Hadeed to Cape Toukoush	E.S.E. $\frac{1}{4}$ E. —	East. —	12
Cape Toukoush to Cape Mavera	S.E. $\frac{1}{4}$ E. —	E.S.E. —	21
Cape Mavera to Cape Bufahel or Rosa	S.E. by E. $\frac{1}{2}$ E. —	E. by S. —	18
Cape Bufahel to La Cala, Boundary of Algier	S.E. $\frac{3}{4}$ E. —	E.S.E. $\frac{1}{4}$ E. —	9 $\frac{1}{2}$

If, on leaving Algier Bay, when bound to the eastward, an adverse wind should come on, you may take shelter under Cape Matifou, to the W.S.W. at about a cannon-shot from shore, in from 8 to 10 fathoms of water.

After

After passing the Bay, no places of note or consequence, within the extent of the Algerine coast, will be seen, and the coast is destitute of harbours. This is the reason why it is so imperfectly known. *Cape Carbon*, which is steep-to, is distinguished by a perforated rock and several white hillocks within it, and may, also, be known by a little rocky isle, named *Pisan*, which lies at 6 miles to the westward of it: to the southward of it, on its eastern side, is *BUJEYA* or *Bougia*, a port by which most of the timber used in ship-building at Algier is brought from the interior. In the road of this place is anchorage in 8 and 10 fathoms.

Within *Point Jijeli*, or *Zezeli*, is a village of that name, on the site of the antient *Igilgili*, and about half-way between Bujeya are the ruins of another, *Mansoureh*, or *Mezuria*. At about $2\frac{1}{2}$ leagues to the southward of *Ras al Friganah* or *Cape Bugaron*, towards the east, is *Kolah*, the antient *Kulu*, where the French had formerly an establishment for carrying on the coral fishery. The little town of *Storah*, on a bay of the same name, is about half-way between *Kolah* and *Ras Hadeed*, or *Cape Ferro*.

BONA.—The town of *BONA*, near the site of the antient *Hippona*, is situate at the head of a bay 5 miles to the southward of *Cape Mavera*, and between is the little harbour named *Port Genovese*. Bona has been a place of considerable trade, in corn, wool, hides, and wax, and had formerly a port under the walls, but it has grown up. By the natives the town is called *Balid-el-Aneb*, or the town of *Jujebs*. The country in the vicinity abounds in fruit. The French had formerly an establishment here, on the little river *Seibous*. The *Bastion of France*, two leagues east from *Cape Bufahal*, was also an establishment of the French, as well as *La Cala*, two leagues farther eastward, both of which have been abandoned, and are in ruins.

THE COAST AND STATE OF TUNIS.

THE STATE OF TUNIS, [antient *Africa*,] the finest of the Barbary States, extends from *La Cala*, lat. $36^{\circ} 52'$, long. $8^{\circ} 24'$ E. to the lagoon *Al Biban*, in latitude $33^{\circ} 13'$, long. $11^{\circ} 20'$. The population of this regency is estimated at about two millions and a half: of whom 7000 may be Turks, 100,000 Jews, 7000 Christians, and the remainder Moors, Arabs, and Renegades.

The climate of *Tunis* is one of the finest in the world, and admirably adapted for the production of most of those articles, which, for the supply of Europe, are brought from a much greater distance. The soil, through the whole state, is remarkably fine; and, with scarcely any cultivation, renders to the husbandman an astonishing return.

During the summer and autumn rain is rare. About the middle of October it is looked for; but, should it not fall till late in the year, there is reason to fear a scanty crop in the spring. Should the rain commence in October, and the wet season continue until April, the greatest abundance appears throughout every part of the country. The grain yields plentifully, and the olive crowns the hopes of the husbandman. Nature spreads over the fields her richest carpet, and the flocks rejoice in health and abundance. The husbandman, in the eastern district, reaps his hundred-fold about the end of April; in the western, his less abundant crops nearly two months later.

The contrast is great when it pleases the Almighty to shut up the windows of Heaven until January. The soil then becomes arid and sterile; the seed when sown produces little; the olive becomes shrivelled and withered, and the flocks perish from want of provender. Such was the horrid picture in 1805, when thousands, both of men and other animals, died through famine. In the most interior parts of the regency rain is seldom known.*

TUNIS has a few good ports, but, excepting that of the capital, they are little frequented. This capital stands on a gulf of the north coast, in latitude $36^{\circ} 47'$, and longitude $10^{\circ} 7'$, about 10 miles south-westward from the site of the antient Carthage.

* For the present information on Tunis, we are much indebted to a very useful volume entitled, "*An Account of Tunis: of its government, manners, customs, and antiquities; especially of its productions, manufactures, and commerce.*" By Thomas Macgill." Octavo, published by Longman and Co., London, 1811. The author says, that his object was commerce, and not pleasure; from the Consuls and chief men of the country he drew his political information; his commercial from the mercantile people and leading brokers.

The city [ant. *Tunes*] stands at about 6 miles to the west of the Gulf which bears its name, and is separated from the sea by an extensive lake, which also receives its name from the city. It is surrounded by a miserable wall of mud and stone, with five gates, neither fitted for ornament nor for use. The population is computed at more than 100,000. The buildings in the town are of stone, but they are generally mean, and in the whole city there is scarcely a building worthy of description, the Bey's palace excepted. The streets are narrow, dirty, and unpaved; the bazaars and shops are of the poorest appearance, and but indifferently stocked. The inhabitants, who crowd these miserable alleys, present the picture of poverty and oppression. At the upper end of the town stands the *Gaspa* or citadel, which was built by the Spaniards, when they had possession of this country. In the city are several colleges and schools, in which the doctors of the law and other literati are maintained.

The Port of Tunis is at the *Goletta*, or entrance from the sea into the lake. As no river, nor even rivulet, runs into the lake, the evaporation is supplied by a current setting in from the sea. The *Goletta* is defended by two forts of considerable strength, built by the Spaniards during the reign of Charles V., and which are kept in a tolerable state of repair.

A small port has been formed at the *Goletta*, into which vessels may enter through a canal of stone, having, at all times, 15 feet of water.

Vessels loading or unloading at Tunis lie off in the roads, in between 5 and 7 fathoms of water, good ground, and are served by large lighters, to transport their cargoes. The lighters, named *Sandels*, drawing little water, even navigate in the lake, and bring their loads to its borders below the city. Vessels, wishing to avail themselves of the port at the *Goletta*, can enter on paying a due of three Spanish dollars a day: but very few choose to lay themselves under so heavy a tax.

The lake between Tunis and the *Goletta* is of an oval shape, and about 20 miles in circuit. The few fish which are found in it are of a coarse quality. The birds on its surface are of the common kinds of sea-fowl, beautiful flamingoes excepted, which are numerous in all seasons.

In the year 1820 the Bey caused a *harbour-light* to be established at the *Goletta*. The lantern, which is 6 feet in height and 3 feet in diameter, is placed on the top of a mast, at the height of 40 feet. It is useful as a guide for preventing Port Farina from being mistaken for the *Goletta*, an error that has often proved fatal. A duty of two piastres is exacted from every vessel, without distinction of tonnage, that shall anchor in the road, to maintain the charges.

The *Moors of Tunis*, in their religion, are, perhaps, more rigorous than the Mohammedans of any other country. Their mosques would be considered as profaned were they entered by any one not of their belief. It is even asserted that, for such an offence, a Christian would forfeit his life. Their temples are, however, sanctuaries where guilty moslems, of every description, are beyond the reach of the law, and may remain unmolested for any length of time. Throughout every part of the country are to be seen houses or places of prayer, which are, in general, either the dwelling-places of saints, or their tombs, called *Marabouts*: and these, like the retreats of the Roman catholic orders, are built upon the finest spots of the country. The *saints*, who inhabit these places, are idiots or insane persons, here held in respect, as favourites of the Eternal; and it is suspected that many crafty people feign madness in order to enjoy the privilege.*

Formerly all posts or public offices were filled by Turks; but, latterly, the Bey has acted on a different principle, relinquishing his power of governing to none. Those about him, who have any influence, being mostly renegades or slaves.

No great degree of discernment is necessary in order to become acquainted with the character of the Moors of Tunis. They are proud, ignorant, cunning, full of deceit, avaricious, and ungrateful. In all their dealings, whether political or mercantile, they will endeavour to over-reach you; and, in dealing with them, you will find it unnecessary to treat them with either friendship or delicacy, as they have no regard for either, and they look on all Christians with contempt. Any good done to them by an *infidel* they look upon as their right, conferring no obligation, and requiring no return.

* These people are noticed more particularly in the description of Tripoli hereafter.

The preceding character is that given by Mr. Macgill: another writer favourably says, "The Tunisians are more affable in their manners, more friendly to strangers, and more faithful in their engagements, than the people of Algier. The extension of commerce, the improvement of manufactures, and the friendship they have formed with European powers, have no doubt contributed to produce these happy effects. They by no means treat Christians with contempt; on the contrary, they allow them that justice which, in vain, is expected from their neighbours."

The naval strength of Tunis is very inconsiderable. There are seldom more than three or four ships of war belonging to the government, the largest of which do not carry more than forty guns; all are badly equipped, and indifferently manned for actual service: these, with about thirty galliots of inferior force, commanded by renegades, compose the whole naval force of the Bey: but other vessels (*corsairs* or *pirates*) are fitted out by private adventurers, who allow certain perquisites to the Bey on all they capture.

The duties on anchorage, loading and unloading, &c. are excessively high: but the trade, nevertheless, is profitable.

The regency of Tunis abounds with rich materials for the philosopher and antiquarian; but, from the state of the country, and jealousy of the government, it is dangerous to travel in the interior. It is remarkable that, throughout almost the whole of the regency, the water in the springs is either salt or hot: but there are some springs of note of the purest water. The water used at Tunis is that which is collected during the winter in cisterns. With one of these every house is provided; and, the houses being flat-roofed, every drop of rain is collected. The hot springs afford baths, which are recommended as salutary in many diseases. In some springs the water is equal to boiling heat.

The black cattle about Tunis are very small. They resemble the small cows which are driven from Scotland to England; and, in the flavour of their flesh they are also very like them. The mutton of Tunis is not esteemed; the sheep are all of the broad-tailed breed, and their flesh tastes strongly of wool. The flesh of the lambs, however, is very good. Goats are also eaten by the people of the country, who are not much accustomed to make distinctions in the quality of their food. The whole of the regency abounds in game; the red-legged partridges, in particular, are abundant, but they have little flavour. Indeed, neither their game nor their fish are of a superior quality. The Barbary courser seems to have changed his place of residence. It is very rare to see, at Tunis, a horse of even ordinary figure. The mules and asses are good, and camels are in general use.

The English, by treaty, have enjoyed greater privileges in Tunis than any other nation. Upon all goods which they import into Tunis, they pay a duty of only three per cent, *ad valorem*; which will be found, by consulting the Tariff, to be trifling, as merchandize is valued at a very moderate rate. The French and all other powers pay also three per cent. duty; but the goods must be imported from their own ports, and under their own colours, otherwise they are subject to a duty of eight per cent. The English can import from whatever port they please, and under every flag, on paying only three per cent. This advantage, in former times, was little attended to, as the commerce with Great Britain was of trivial consequence; but now that the whole supply must come from Malta, it becomes of consideration, and is therefore offensive to all in the French interest at Tunis: for, it is to be recollected that, formerly, the only merchants at Tunis were of the French nation or under its protection.*

The *Fezzens* or red caps worn by all Moslems, Greeks, Armenians, and Jews, who wear the Oriental dress, was formerly a very extensive branch of Tunisine manufacture and export. Tunis alone formerly enjoyed this manufacture, but she now divides it with Marseilles, Leghorn, and other ports; though those of Tunis are still the best, being equally superior in colour, fineness, and strength. The regency is rich in articles of export; but they are not of the greatest variety. They consist in grain of different kinds, oil of various qualities, wool, hides, wax, soap, and several articles of less consideration. The wheat is excellent, and that which, in the Levant, is called

* For the Tariff, (1811,) by which the duty is levied on goods imported by the British into the Regency of Tunis, see Mr. Macgill's work, pp. 111 to 118.

Albanian or hard grain, but its exportation is, at times, prohibited. The barley is, also, good. Some of the oil is little inferior to that of Tuscany or Genoa, and is often sold as such, even in Italy. The duties capriciously fluctuate.

The island *Jerba*, in the south, is celebrated for its woollen manufactures, which are much worn by all classes of the inhabitants of Tunis. The returns which the people of *Jerba* take are very trivial; yet, in a small degree, they take off some of the imported articles, both colonial and manufactured.

Soap is made in the regency of Tunis to a considerable amount: besides which are the manufactures of caps, above mentioned, woollen stuffs, and Marocco leather. The manufacture of caps gives food to thousands of inhabitants, and causes a great circulation of wealth.

The woollen stuffs, which are manufactured principally at *Jerba*, are of a thin texture, resembling in some degree a soft serge. They are well made, from the finest wool produced in the country. All classes of Moors, who have any covering, are dressed, more or less, in this manufacture. Thousands have no other dress than a fezzan or cap, and a blanket thrown round the body and shoulders in several turns. Others have turbans and girdles of woollen; and almost all have a *berous*, or cloak. The females have a robe of woollen gauze thrown round them, some with silk strips; and many wear shawls, both long and square, of the same species of manufacture. This kind of woollen stuff is also used for blankets, which are soft, light, and warm. But besides the vast quantities which are used in the country in these various ways, a great portion is exported both to Europe and the Levant. The shawls are dyed of different brilliant colours, and are to be seen in every part and city of Turkey. It is impossible to give a true idea of the extent of this manufacture: thousands are employed in it, in different parts of the state.

The manufacture of Marocco leather is, also, considerable. Great quantities of dyed skins are annually exported from the country, and as almost all the Moors wear red leather slippers or boots, the consumption is great.

The imports have been woollen cloths, chiefly from France; British muslins; Irish linens, of the coarser quality; coarse German linens; serges, called Imperial serges; and druggets. Coffee of Martinique, &c. is more generally used than that of Mocha, in consequence of a law that Turks alone shall sell Mocha coffee. It is most advantageously sold in barrels of three or four cantars each. Sugar is imported in considerable quantities. Spices find a limited sale: but a large quantity of alum is required for the manufactures. Vitriol is also much used. Other imports are tin, lead, iron, raw silk, Spanish wool, (one of the most extensive and lucrative articles,) wine, cutlery, cochineal and other dyeing materials, gum-lac, vermilion, indigo, and dye-woods.

The NORTHERN COAST, &c.—From *Cape Mavera*, in lat. $36^{\circ} 58'$, long. $7^{\circ} 50'$, to the little isle *TABARCA*, [ant. *Tabraca*], the course and distance are E.S.E. $\frac{1}{2}$ E. [$E. \frac{1}{4}$ S.] 41 miles: and, from *Cape Bufahal* or *Rosa*, (known by its reddish colour), E.S.E. $\frac{1}{2}$ E. [$E. \frac{1}{4}$ N.] 24 miles.* *Tabarca* is at a short distance from the shore, and lies off the mouth of a little river, *Wad Ezzeine*. It is a mile and a half in circumference. On its north end is a castle, with several towers and corn magazines, built by the Genoese when they had possession of the island. It was formerly frequented by vessels from Spain and Tuscany for corn, but has latterly been more noted for the coral fishery carried on in its vicinity, off *Cape Bufahal*, &c. and in which, taking an average of ten years, previous to 1811, about 150 boats have been annually employed, each manned by ten persons. These fishermen are generally from Sicily or from Naples, and each boat pays a certain sum for permission. What they take is either disposed of at Tunis, sold at *Tabarca*, or carried to Italy and France.

Within the isle a ledge of rocks extends off from the main, with two fathoms over its extremity, but the rocks may always be discerned by the breaking of the sea, especially with northerly winds. There is a road to the eastward, and another on the west side, of the island; but they are fit only for small vessels drawing 10 or 12 feet of water. There are several rocks above water, lying to the westward of the island near the main; and thence along the coast to *Cape Bufahal* are from 16 to 20 fathoms

* Captain Smyth's general Chart of Sicily, &c. includes the whole of the African coast hence to Cape Africa. See Note on page 132.

of water, stony ground, close to the shore: but, to the north-eastward of the island is good sandy ground, with 6 or 7 fathoms of water, not, however, without rocky spots along the shore of the main.

At 13 miles N.E. by E. $\frac{3}{4}$ E. [*N.E. $\frac{1}{4}$ E.*] from the *Isle Tabarca* is *Cape Negro*, which is rocky, projects out to some distance, and from the N.E. appears like an island. A pyramidal rock stands at a little distance to the east of it. The coast midway between *Tabarca* and *Cape Negro* is distinguished by sand-hills. *Ras al Munshihar*, or *Cape Serrat*, [ant. *Candidum*,] is 5 leagues E.N.E. $\frac{1}{4}$ E. [*N.E. $\frac{3}{4}$ E.*] from *Cape Negro*, and has several rocks about it, above and under water, which extend eastward.

The *Fratelli*, or *Brothers*, are two rocky islets lying about two miles from shore, at the distance of $10\frac{1}{2}$ miles E. $\frac{1}{2}$ N. [*E.N.E.*] from *Cape Serrat*. The coast between forms an irregular concave line, and in the course between the depths are 23 and 24 fathoms, deepening outward to 45 fathoms, of water.

GALITA.—The Island *Galita*, in latitude $37^{\circ} 31'$, and longitude $8^{\circ} 52'$, lies at the distance of $27\frac{1}{2}$ leagues East [*E.N.E. $\frac{1}{2}$ E.*] from *Ras Hadeed*, or *Cape Ferro*; 47 miles N.E. by E. [*N.E. $\frac{3}{4}$ N.*] from *Cape Bufahal* or *Rosa*, and 25 miles N. by E. $\frac{1}{2}$ E. [*North*] from *Cape Negro*. *Galita* is about a league in length, uninhabited, and of moderate height. Off the N.E. end are some high rocks, the *Galitona*, with a sunken rock more to the northward; and, at half a league from the S.W. end are two others, *Aguglia*. With the exception of the south side, where there is a good road, all the shore is rocky.

On coming from the northward or eastward, with the intention of anchoring in *Galita Road*, you must give a berth to the *Galitona*, or three rocks that lie off the N.E. point of the island: having passed them, in 9 or 10 fathoms, run along to within a cable's length of the east point, in the same depth, and proceed to the westward for the road, which is near the middle of the south coast. There are two creeks, and near the westernmost, not far from the water side, is a gray spot of land, opposite to which is the best anchorage, in 10 or 11 fathoms, on sandy ground, very near the shore. Here you may lie sheltered from N.E., North, N.W., and West, winds; but it is to be noticed that, in heavy gales from the northward, the sea runs round the island, and causes vessels lying far off to roll very deep. It is also requisite to notice that a strong northerly wind comes in heavy gusts and flaws from peaked land at the east end of the island, which renders it dangerous to carry much sail when you come in that way: under such circumstances, you may anchor near the east point, in 20 or 22 fathoms.

On coming in from the westward, you may run in between *Galita* and the *Aguglia* or high rocks which lie off the S.W. end, as above described; and, having passed the west point, run up to the road, and anchor as above directed. In advancing this way you must be careful to avoid the *Sorelli Rocks*, exhibited in the charts by Captain Smyth, which lie in lat. $37^{\circ} 24\frac{1}{2}'$, long. $8^{\circ} 36'$, at 13 miles W. by S. [*S.W. by W. $\frac{1}{2}$ W.*] from the west end of *Galita*, and around which there is a great depth of water.

NORTH COAST CONTINUED.—At two leagues to the eastward of the islets called the *Fratelli*, already noticed, is a point named *Ras al Dukara*: at two leagues farther, to the north-eastward, is another, *Ras al Krun*; and, at 10 miles eastward [*E. by S.*] from the latter is *Ras al Abead* or *Cape Bianco*, with its look-out house, which mark the entrance to the Lake of Bizerta. At 10 miles S.E. by E. $\frac{1}{4}$ E. [*E.S.E. $\frac{1}{4}$ E.*] from the extremity of *Cape Bianco*, is that of *Cape Zibeeb*, (otherwise *Marabout* or *Dragona*,) and, at 4 leagues S.E. $\frac{3}{4}$ S. [*S.E. by E. $\frac{1}{4}$ E.*] from *Cape Zibeeb* is the extremity of *Cape Farina*, (otherwise *Guardia*,) the antient *Apollinis Promontorium*. These are the northernmost points of the continent of Africa. The coast is very rocky and irregular, with intervals of sandy shore.

BIZERTA.—The *Bay of Bizerta*, between the Capes *Bianco* and *Zibeeb*, is 4 miles deep, and on its S.W. side, upon the western bank of the river, is the town of *Bizerta*, [ant. *Hippo Zarytos*,] off which there is anchorage, at a distance from shore, in 5, 6, and 7, fathoms. The shore of the bay is composed of sandy downs; the port is good, and here the Tunisian galleys are laid up.

Two rocky islets, the *Cani* or *Dogs*, lie at the distance of 5 miles N.E. from *Cape Zibeeb*: they are low and dangerous, but there is a good passage between them and the shore, with a depth of 18 fathoms in mid-channel, and shoaling gradually to 5 on each side.

The

The *Isle Piano*, or *Plane Isle*, (otherwise *Camla*,) is a low sandy isle off *Cape Farina*, from which it is two miles distant. In the channel between is a depth of 9 fathoms. *Piana* may generally be approached on all sides to the depth of 4 fathoms. On coming from the westward, it is requisite to keep a good look-out for the *Caxi* above-mentioned; it is equally requisite to be cautious when approaching *Piana*; particularly in hazy weather or by night: you may safely round the latter in 12 or 10 fathoms.

THE SKERKIS and KEITH'S REEF.—The great bank between the north of Africa and the Island of Sicily was first explored, as already shown, (page 162,) by Captain *Smyth*: there had, however, been previously discovered, in 1802, by Captain *Durban*, in H. M. sloop *Weazle*, several reefs, lying nearly in the midway between *Cape Bianca* and the *Isle Maritimo*. Of these, the first to the westward are two reefs called the *Skerkis*, occupying a space of $3\frac{1}{2}$ miles, nearly true North and South, and one in breadth. The *Weazle* anchored on the S.W. side of the southern reef, and her situation, as since corrected, appears to have been in latitude $37^{\circ} 44'$, and longitude $10^{\circ} 45'$, at $29\frac{1}{2}$ leagues E. $\frac{1}{2}$ S. [$E. \frac{1}{2}$ N.] from the island *Galita*, and $20\frac{1}{2}$ leagues W. $\frac{1}{2}$ N. [$W. S. W. \frac{1}{2}$ W.] from the South end of *Maritimo*. The two reefs are separated by a channel, a mile in breadth, and are surrounded by a bottom of sand. On the southern one the depth expressed is 3 fathoms, but the water was found to shoalen 9 feet on the rocks. On approaching, the water was, at all times, so clear that the bottom was distinctly seen in 25 and 30 fathoms. The depth of water on the northern reef was found from 10 to 14 fathoms.

At 5 leagues E. by S. [$E. \frac{1}{2}$ N.] from the northern *Skerki* is *Keith's Reef*, which, in a true direction extends nearly East and West. Its extreme length is three cables, and breadth five-eighths of a cable. The east end is partly dry, and the west end has from $2\frac{1}{2}$ to 4 fathoms over it; the whole of it consists of large rocks, on which, with a swell, the water breaks: but near it are from 25 to 37 fathoms. Off its east end is a sandy shoal. From the east end of the reef the south end of the *Isle Maritimo* bears E. $\frac{1}{4}$ S. [$E. N. E. \frac{1}{2}$ E.] 41 miles. About half way between the *Skerkis* and *Keith's Reef* is a small bank of 15 fathoms, near which there are soundings of 35 to 60 fathoms, quickly deepening to the north and south.

GULF and BAY of TUNIS.—The *GULF of TUNIS* is, in fact, a large bay, the entrance of which is between *Cape Farina* and *Cape Bon*, a distance of 13 leagues. On the one side of this entrance is the *Isle Piana*, already described, and on the other is the *Isle Zembra*, in latitude $37^{\circ} 7'$, and longitude $10^{\circ} 49'$, bearing from *Piana* S.E. by E. $\frac{1}{2}$ E. [$E. \frac{1}{2}$ S.] 8 leagues. This isle is 7 miles from *Ras al Amar*, the nearest land within *Cape Bon*, and there is a good passage between for vessels bound to or from the eastward, but there is an islet and some rocks, *Zembratta*, nearly in mid-channel, which must be carefully avoided, and there are other rocks near the main. The soundings over the gulf decrease from 60 to 15 fathoms.*

From

* "During our progress up the Mediterranean, (says a recent voyager,) we observed, on the morning of the 30th of June, the whole surface of the sea covered with locusts, most probably driven off the coast of Africa by a strong wind. They had been but a little time in the water, judging from the perfection of their bodies; and this opinion was afterwards confirmed by our finding several alive among the rigging aloft. They exactly corresponded with the description given of the *Gryllus Migratorius* of Linnaeus, or common migratory locust, which, of all the insects capable of injuring mankind, seems to possess the most dreadful powers of destruction. Legions of these animals are, from time to time, observed in various parts of the world, where the havoc they commit is almost incredible: whole provinces are, in a manner, desolated by them in a few days, and the air is darkened by their numbers; nay, even when dead they are still terrible, since the putrefaction arising from their inconceivable number is such that it has been regarded as one of the probable causes of pestilence in the Eastern regions. This formidable locust is of a brownish yellow, variegated about the belly and legs with a bluish flesh colour. It is armed with jaws and furnished with feelers; its eyes are singularly dull, with perpendicular streaks of white in them, besides which it has three transparent specks in the front of its head. On all the feet the claws are double, and its hind ones are formed for leaping exactly like those of the common grasshopper.

"On the following day we had variable airs and calms throughout the whole of the morning; during which we observed the surface of the water for several leagues a-head of us to be covered with a red colour, broken into clouds in some places, and in others forming one continued stream. On a nearer approach we found it to be a mass of animal putrefaction, swimming on the surface of the sea like oil, and emitting a most disagreeable odour. In several places we could distinctly discern

From the Eastern end of the Isle *Piana Cape Carthage* bears S. by W. $\frac{1}{2}$ W. [*South*] 6 leagues, and at 5 miles to the S.W. of this is the *Road of Tunis*. At 4 miles within *Cape Farina* to the S.W. is *Port Farina*, the antient *Utica*, before which is a roadstead, nearly as safe and commodious as that of Tunis. Of *Utica*, which is associated with the name of Cato, no vestiges remain; and, owing to the recession of the sea and the conflux of mud, its situation cannot now be determined with precision.

The site of the famous *CARTHAGE* [ant. *Carthago*] is within the promontory of that name, on the N.E. side of the Lake of Tunis, and at about 12 miles, by land, from Tunis. The existing ruins are nearly three miles from the sea, although Carthage extended to the very shore. The space between Cape Carthage and Tunis still exhibits immense vestiges of antiquity. The remains of the great aqueduct which supplied Carthage with water, from the distant mountains of Zawan, may be traced from the mouth of its reservoir until lost in the mountains; as may the whole of the site of Carthage by its subterraneous ruins. Such is the actual condition of a spot upon which there once existed more than 700,000 inhabitants, and which governed three hundred cities and towns in Africa!

MIRSA or *MARSA*, at two miles north-westward from Carthage, and nine north-eastward from Tunis, is a pleasant spot, where the Bey has two country-houses, one of which has been a costly work, built by *Hassan Bey*, surnamed the Good. From these houses are orange-gardens, reaching almost to the shore: in the gardens is a well of sweet water, esteemed the best and lightest in the kingdom; and close to this is a coffee-house. Numbers of people resort hither to drink of this natural luxury; for those alone who have lived in such a climate can justly estimate the blessing of a clear fountain. In the middle of the court is a large mulberry-tree, under the shade of which they sit and smoke; take coffee, play at chess, and inhale the comfortable sea-breeze that refreshes this charming spot.

CAPE CARTHAGE, being a high bluff point, may be readily known: from it to the *Goletta*, the bearing and distance are nearly S.W. 5 miles: From the Cape to *Ras Zaphran*, on the opposite side of the bay, E.S.E. $\frac{1}{2}$ E. [*East*] 13 miles. These capes form the entrance of what is properly called the *Bay of Tunis*. The coast of this bay is low, and the ground good for holding, in from 10 to 4 fathoms of water: for, although the bay is exposed to the N.E. winds, they do not blow home; nor cause any great sea.*

The best anchorage in *Tunis Bay* is in from 5 to 6 fathoms, soft muddy bottom, with Cape Carthage bearing N.N.E. $\frac{1}{2}$ E. or N.E. by N., and the *Goletta* castle between N.W. by W. and West. Winds that occasion the most sea here are from N.E. to E.S.E., but, as it is excellent holding-ground, it seems that a fleet or squadron might remain here in the most tempestuous weather, and block up or watch the motions of an enemy. You moor with the best bower to the eastward, and small bower to the westward. The bay is so extensive that a number of ships may lie in it, without the reach of the cannon on shore. Fresh water may be had from a reservoir within the entrance of the *Goletta*.

The following directions for coming in, from the eastward, were communicated by the late Mr. Wm. Smith. They were written in or about 1817.

In steering for *Tunis Bay*, from the eastward, make *Cape Bon*, which is high, and, in clear weather, may be seen at the distance of 15 or 16 leagues. At first it appears like an island, the land being low to the southward, high at the north end, and sloping gradually to the south. After passing *Cape Bon*, steer N.W. by W. for the Island

discern fragments of locusts, and on drawing up a bucket full of this filth, we found several of their bodies almost perfect underneath this surface. It occasioned such an unpleasant smell as to oblige us to throw it overboard immediately, nor were we clear of the general mass of it until midnight.

"Running with a moderate breeze all night, we were, on the next day, abreast of the uninhabited island of *Zembra*; and at noon were off *Cape Bon*, a high promontory, projecting from a low and narrow sandy isthmus, remarkable for its summit's displaying horizontal strata of white spar stone, which renders it barren and unproductive, the interstices being covered with a short brown heath."

* From the Bay of Tunis, on the 25th July, 1822, Captain Smyth writes to his friend, the Baron von Zach, thus: We have at present, in this bay, excessive heat. The thermometer is at 90 and 93° in the day, and 84° at night: this, connected with miasme and the exhalations of the marshy lake between the *Goletta* and Tunis, envelopes us in an atmosphere quite insupportable. I am only surprised that Tunis is so healthy as it is.

Zembra,

Zembra, which also is high, and may be passed at the distance of a mile on any side. After passing this island, steer S.W. by W. or W.S.W. for Cape Carthage, which cape is 9 leagues from Zembra, and forms the west side of the Bay of Tunis. There is no sounding to be got with the hand-lead until abreast of Cape Carthage. You will then have 20, 18, and 15, fathoms, and will shoalen the water gradually in standing in to the bay. The marks for anchorage are given above.

The day after the frigate's arrival, the Goletta saluted her with 21 guns, which was returned with the same number; and, on the captain's going on shore they saluted him with 12 guns, which was returned with the same number. The country people appeared to be very civil and well-disposed towards the English in general.

The CURRENT along the coast, in settled weather, mostly sets to the eastward near the north shore and across the Bay of Tunis, for which an allowance must be made when sailing in or out; particularly by night: but the current varies, and sets, at times, in even a contrary direction, according to the wind. In August, 1822, when Captain Durban surveyed the Skerkis, it was found that, during a S.E. wind, the current from off the coast, by Cape Bon, set to the N.N.W. or nearly so, at the rate of a mile and three-quarters in the hour; while, at the same time, it set from Keith's Reef towards the Skerkis, to the W. by S. See upon this subject the remarks of *Captain Smyth*, already given in page 168. For the Winds and other phænomena of this region, see pages 142, 143.

CAPE BON to the SOUTHWARD.—Captain Gauttier has given the position of the summit of Cape Bon as latitude $37^{\circ} 4' 45''$, and longitude $11^{\circ} 3' 45''$. Captain Smyth places the N.E. extremity in $37^{\circ} 6'$ and $11^{\circ} 3'$. A happy coincidence, which confirms its situation. The appearance of the Cape has been noticed above. Cape Bon was the antient *Hermæum Promontorium*; the coast trends two leagues to the westward [*W.S.W. $\frac{1}{2}$ W.*] from it, and there terminates in *Ras al Amar*, the antient *Mercurii Promontorium*. This portion of coast is foul, and there is, particularly, a rock at some distance without the cape last mentioned.

From Cape Bon, on the east, the coast trends nearly South [*S. by E. $\frac{1}{2}$ E.*] 17 miles, to the *Ras al Mustapha*, which may be known by the little town of *Kalibia*, on the site of the antient *Clypea*. At $11\frac{1}{2}$ leagues true East from the cape is the Island *Pantellaria*, a description of which, as a dependency of Sicily, has been given in pages 163, 164.

From *Ras al Mustapha* to *Ras al Mahmur* the coast trends S.W. $\frac{1}{2}$ S. [*S.S.W.*], 9 leagues, regular soundings along shore, and nothing remarkable on the coast. Between *Ras al Mahmur* and *Al Kuriat* or *Conigliera Islands*, the bearing and distance are South [*S. by E. $\frac{1}{2}$ E.*], 12 leagues. The space between forms the Bay of *Hamamet*, over which there are regular soundings, and clean ground. At five miles westward from *Ras al Mahmur* is *Nabal*, antient Neapolis; and, at two leagues farther, on a projecting head, is *Hamamet*, with its little harbour. *Herkla* [ant. *Horrea Cœlia*] stands in latitude $35^{\circ} 59'$, at $7\frac{1}{2}$ leagues to the S.S.W. $\frac{1}{2}$ W. [*S. by W. $\frac{1}{2}$ W.*] from *Hamamet*: and *Sousa*, [ant. *Cabur Susis*], with its castle, in $35^{\circ} 48'$, 4 leagues to the S. by E. [*S.S.E. $\frac{1}{2}$ E.*] from *Herkla*. At 3 leagues eastward of *Sousa* is *Monasteer*, or *Akgdeer*, on the west side of the entrance of the Gulf of *Lempta*, the south coast of which was distinguished by the antient *Leptis Parna*.

The town of *Mahedia* or *Mahdia*, on the point called Cape Africa, is 5 leagues to the southward of the Kuriat Isles. This is supposed, by M. D'Anville, to be the site of the *Turris Hannibalis*, whence Hannibal took his departure for Asia. The coast trends 7 leagues to the southward of this point, and thence forms the Gulf of *Cabes* or the Lesser Syrtis, on the south side of which is the island *Jerba*, noticed in the general description, page 195. This bay has, with his accustomed accuracy, been surveyed by Captain Smyth, and now, therefore, may be navigated with confidence; which heretofore was not the case, as its figure was unknown. The isle *Jerba*, or *Djerbah*, was once the isle of the *Lotophagites*: and its shores are still covered with the lotos or lotus, from which it derived that name.

GULF of KABES, CABES, or KABBS.—The following Remarks on the Eastern Coast of Tunis and the Gulf of Cabes, were addressed by *Captain Smyth* to the *Baron von Zach*, 11th June, 1823. "Foul weather and rain, having hindered me from quitting the vessel, I have made use of my journal to accomplish my promise."

After

After having reached the entrance of the Gulf of Hammamet, I was carried to MAHEDI, a city built with great magnificence on the ruins of the antient *Adrumetum* or *Africa*, by Al-Mahedi, the fatal founder of the Fathimite dynasty.

This city is on a fine plain, which rises by degrees, and is surrounded by orchards and vineyards. It stands on a little tongue of land which advances into the sea in latitude $35^{\circ} 30' 26''$ and longitude $11^{\circ} 6' 51''$, and within a wall of circumvallation, reinforced by towers and bastions, and commanded by a citadel on a height. The port, named the *Cothon*, was spacious, commodious, and safe. In fact, it was the strongest, the richest, and finest, maritime place in Africa, before it was blown up, by order of the emperor Charles V.* The massive rubbish that yet remains testifies the force and violence of that terrible explosion. The citadel only and one or two towers of the fortifications have escaped the otherwise total ruin: but, notwithstanding this, it is again one of the strongest places of Barbary.

The coast southward, from Cape Africa to Salakto, (about 6 miles,) is low and sandy; but, at some distance within, the land is well cultivated, and, among other articles, it produces a great quantity of indigo. From Salakto, southward, to *Cape Vada*, (a farther distance of 6 leagues,) the coast is lower. This cape is the north point of the Channel of Karkenna, and upon it is a very high tower, called *Burdj Kadija*, which may be seen 15 or 16 miles off, and which, therefore, serves as a beacon for avoiding the neighbouring shoals. The tower stands in lat. $35^{\circ} 10'$, long. $11^{\circ} 10'$.

The coast south-westward, between *Cape Vada* and the town of *Sfukus* (12 leagues,) is of a considerable height. This coast forms the western side of a channel, of which the eastern side is formed by the Karkenna Isles. It appears of great breadth, but is, in reality, very narrow, having very extensive banks strewed with rocks. *The tide renders it still more dangerous*, as it runs here two miles and a half in an hour, and rises and falls 5 feet, or thereabout. The time of high-water, on the full and change, is at 3h. 30m. p.m.

The KARKENNAS are four very low and irregular islands. The westernmost is named *Zara Lakalia*; it is nearly 14 miles in circumference, and its tower stands in lat. $34^{\circ} 38' 30''$, long. $10^{\circ} 56'$. The central isle is of a very irregular shape; it has seven villages in the western part; and three in the eastern part, named Shagra. The two other isles are inhabited; that toward the east is called *Kousha*, and is in lat. $34^{\circ} 48' 50''$, long. $11^{\circ} 19'$. The inhabitants of these isles are of a livid colour, and appear very miserable. Their principal nutriment is in dates and fishes. The first are in great quantities in these isles, which are covered with the trees.

SPAKUS is a large and fine town, inclosed with very high walls, with very fertile environs. It is said to take its name from the great quantity of *sfukous*, or cucumbers, produced in the neighbourhood. The inhabitants have a great trade in grain, oil, wool, soap, dates, &c. Here is excellent anchorage for ships. The head of the mole is in lat. $34^{\circ} 43' 56''$, long. $10^{\circ} 39' 50''$.

From SPAKUS, south-westward, as far as *Niktar*, *Maharas*, and *Ungha*, (nearly 10 leagues,) the land rises considerably towards a chain of mountains called *Jibbel Tielth*. The coast does not afford any striking object between this part and the isles of *Surkenis*, (more to the southward,) of which the greatest is in lat. $34^{\circ} 20' 5''$, and long. $10^{\circ} 7' 55''$. The ruins in the south of this isle are in $34^{\circ} 17' 15''$ N. and $10^{\circ} 6' E$.

The coast between the *Surkenis Isles* and town of *Kabes*, and thence to *Jerba*, is crowned by the mountains of *Tafalamah*, *Jibbel Lecal*, and *Jibbel Tasharra*. All this coast is very safe, for we could freely approach by the lead, having 7 and 8 fathoms at three-quarters of a mile off, except when advancing to the adjacent part of the *Surkenis Isles*, and to the N.W. coast of *Jerba*, where the water is shoal.

The town of KABES or CABS is situated on very low land, but well cultivated at the foot of the mountains *Jibbel Hamarra*: it is surrounded by several villages, and stands on the south bank of a river of fresh water, having the village *Jarea* to the north. This space forms a small port, from which they export dates and henna.† The streets

* In 1550, the celebrated Andrea Doria took the town from the famous pirate *Dragut*, who made the governors of Italy tremble: and in the following year, being considered untenable, it was destroyed by order of Charles V. and abandoned.

† *Henna* or *Henné*, is a polypetalous plant which the Eastern females use for staining their eyelids, hands, and feet, of a yellow colour. They employ it also in dyeing silk, cotton, wool, &c.

are regular, but very dirty. The castle is a sort of square redoubt, with nine guns, and well built. It stands in $33^{\circ} 53' \text{ N.}$ and $10^{\circ} 4' 16'' \text{ E.}$ The natives of the country hereabout are at perpetual war one with another. I was obligated to give orders to fire on the parties which approached us.

From Kabes to the villages of *Zarra* and *Kataunah* or *Catana* the coast is again low, as far as *Jerba*, which is an island very populous, well cultivated, and very rich. This forms the S.E. side of the Gulf.

COAST AND STATE OF TRIPOLI.

THE state or regency of Tripoli is of great extent, and terminates eastward near the meridian of $24\frac{1}{2}^{\circ}$. Extensive as this territory is, it is not supposed to contain more than two millions of inhabitants, the greater part being desert.

Of the coast very little was accurately known, until it was explored by Captain Smyth, whose recent and important survey has imparted the only view of it not free from the most extraordinary errors.

The only place of trade upon the coast, of real importance, is the city of *Tripoli*, situate in latitude $32^{\circ} 54'$, and longitude $13^{\circ} 11' \text{ E.}$ *Bengasi*, in $32^{\circ} 7' \text{ N.}$, and $20^{\circ} 2' \text{ E.}$ is, also, a place of some trade. Most of the inhabitants of the maritime part live, as is well known, upon commerce and piracy, and many of the inland on plunder and robbery; latterly restricted to narrower limits than formerly, but still not free from the charge. The villages of the country are mostly very poor and thinly inhabited. Of the antient cities all are gone to ruin, or inhabited only by a few fishermen, lime-burners, pot-ash makers, &c., mostly in the lowest degree of misery and wretchedness.

The city of *TRIPOLI*, the *Tarabolus* or *Tarables* of the natives, is situated on the sea-shore. The inhabitants consist of Moors, Turks, and Jews, and amount to about 15,000. Here European renegades are advanced to offices, and may obtain the highest rank. The town contains six mosques, and is said to possess twenty or thirty armed vessels. Here is a *café* or coffee-house for the merchants, and two others for the inferior order of people; besides which are several taverns where wine and liquors are sold. The market is well supplied, and provisions are cheap: the bread and meat are excellent. The Jews have three synagogues. The merchants here correspond with Marseille, Venice, Trieste, and Malta. Tripoli is well walled, and protected by batteries mounting 115 pieces of heavy cannon, and defended by a numerous garrison of Turks, Moors, and Arabs. In front of the town is a long range of rocks and shoals, extending thence E.N.E. $\frac{1}{2} \text{ E.}$ [*N.E. by E.*] more than a mile and a half from the N.E. angle of the city, and which form the harbour. Here, on the 3d of August, 1804, twenty-two Tripolitan gun-boats and other armed vessels defended the place against the American squadron, under Commodore Preble, by forming a strong line of defence at secured moorings within the reef.

The harbour of Tripoli is very commodious for small vessels. For a capital, the town is small; the houses are generally dirty and mean; the streets irregular, narrow, and filthy: but it is a place of considerable trade in corn, oil, wool, ostrich feathers, dates, skins, saffron, senna, &c. There are very fine Arabian horses here, and good cattle, but they are small. There are, also, some good sheep, and abundance of fine fish, particularly mullet. The land in the vicinity is very loose and sandy, rather barren than otherwise, and destitute of rivers and springs; so that the only fresh water obtainable, as at Tunis, is that which is preserved in the rainy season. The coast presents a long line of palm and date trees. The caroube or locust tree is, also, plentiful here. Game, of all descriptions, abound.

Captain Lyon, R.N., in the relation of his Travels in Northern Africa, 1819, has given some remarks on Tripoli, from which the following are extracted. There are here, he says, two great markets held weekly, one on the sands behind the town every Tuesday, and the other on Fridays, about 4 miles off, amongst the gardens of the *Messhia*, which form a stripe of 3 or 4 miles in breadth, between the beach and the desert. In the town are bazaars, which are open every day. There are streets, covered-in overhead. The shops are ranged on each side, and are very small. Slaves and goods are carried about, before the traders, by auctioneers, who keep up a continual din, each calling the price last bidden. The Jews have a quarter of the town expressly to themselves, where they have their shops, and in which they are shut up

every evening at sun-set. This place is called *Zanga t'el Yahood*. These people are much persecuted, yet they contrive to engross all the trade and places of profit. They are forbidden to use gaudy clothes, and are allowed turbans of blue only; a colour not used in the turbans of the Mohammedans.

Several houses, set apart for the reception of merchants and their goods, are called *Fondook*, and answer to the description of the Caravanseras or Khans of the East. There are a few schools at which reading and writing, though to no great extent, are taught in a very noisy manner. A knowledge of letters, however, is by no means necessary to constitute a great man, or to advance him to any post of trust. The public baths are similar to those in the eastern countries, but not so elegant.

Drunkenness is more common in Tripoli than even in most towns in England. There are public wine houses, at the doors of which the Moors sit and drink without any scruple; and the *Saldanah*, or place of the guard, is seldom without a few drunkards. The greater part of the better sort of people also drink very hard; but their favorite beverage is *rosolia*, an Italian cordial, and it is not uncommon for visitors, when making calls, to give unequivocal hints that a little rum would be well received. Prostitutes are in large numbers, and are obliged (if known to be such) to live in a particular part of the town, called *Zanga t'el Ghaab*, or quarter of the prostitutes, under a superintendent appointed expressly for that purpose.*

A kind of vitiated Italian is generally spoken by the inhabitants of the town; so that Christians have not much difficulty in transacting business. The coin current here has only 14 per cent. of silver in it, and is daily decreasing in value. Near the sea-gate are the remains of a fine square Roman building, which now has its arches filled up, and is used as a store-house.†

SAILING DIRECTIONS.—Tripoli bears South [*S. by E. $\frac{1}{2}$ E.*] 55 leagues, from the Isle *Lampion*, described in page 185, and S.W. $\frac{1}{4}$ S. [*S. by W. $\frac{3}{4}$ W.*] 63 leagues from the S.W. end of Malta, described in page 183.

* Captain Lyon says, "that the *Marabouts* (a people noticed on page 193,) are the most extraordinary characters of Tripoli: they are a set of people much spoken of in all Moslem countries; but the requisites to constitute one of these saints do not appear to be every where the same. In the interior they consist in keeping up the outward show of sanctity, in abstaining from proscribed liquors, in avoiding improper or profane expressions, in being faithful to the limited number of wives, (namely four,) and in not intriguing with the wives of other men; whilst in Tripoli such forbearance is not considered necessary. The *Marabouts* there are of two classes: ideots, who are allowed to say and do whatever they please, and men possessed of their senses, who, by juggling and performing many bold and disgusting tricks, establish to themselves the exclusive right of being the greatest rogues and nuisances to be met with. There are mosques in which these people assemble every Friday afternoon, and where they eat snakes, scorpions, &c. affecting to be inspired, and committing the greatest extravagancies." These people have an annual festival, which continues for three days, during which, while they are parading the streets, no Christian nor Jew can safely make his appearance, as either would be in danger of being torn to pieces.—*Captain Lyon's Travels*, pp. 9 to 11.

† A beautiful view of it is given by Captain Lyon, with a copy of the remaining inscription, by which it appears that it was a triumphal arch, dedicated to the emperor Aurelius Antoninus, who reigned in the second century.



Sketch of the City of Tripoli, as it appears from the Outer Road.

The town, standing on low ground upon the shore, may be known by the trees that stand on, and extend along, the coast to the eastward of it. It is very difficult to distinguish the points of coast in the vicinity, unless you fall in directly with the town. There is a double land; which makes, when you are at 3 leagues from the shore, like a head-land, or cape, but lies far up in the country. With this land S.W. $\frac{1}{2}$ S. [*S.S.W.*] at the above distance from shore, Tripoli will bear W.S.W. $\frac{1}{2}$ W. 6 leagues distant. All the low land of this country is white and sandy. There are some other hills, making in a similar form, but they are farther inland, and, when bearing S.S.W. $\frac{1}{2}$ W. [*S. by W.*] the town will bear S. by W. $\frac{1}{2}$ W. [*South,*] and the land to the eastward S. $\frac{1}{2}$ W. [*S. by E.*]

The best anchorage in the Outer Road of Tripoli is with the westernmost minaret (or steeple) in the town bearing S. by W. $\frac{1}{2}$ W. [*South*] in 16 fathoms: the eastern part of the bay will then bear S.E. by E. [*E.S.E. $\frac{1}{2}$ E.*] and the round castle on the east side of the bay will be in one with the second rock, and will bear S. by E. $\frac{1}{2}$ E. [*S.E. by S.*]

The opening into the Harbour is between reefs on either side, at nearly two miles E.N.E. $\frac{1}{2}$ E. from the N.E. angle of the city. It is more than half a mile broad, beyond a cluster of islets, called the *Harbour Rocks*, which you pass by keeping them on the starboard side. From these islets the reef extends, in the above direction, at least one quarter of a mile. Having advanced thus far, you haul in to the westward, with the middle of the town bearing W.S.W. $\frac{1}{2}$ W., [*S.W. by W.*] and may come to an anchor in 5 or 6 fathoms, sandy bottom, with the town W. $\frac{1}{2}$ S. three-quarters of a mile distant; or, at half that distance in 3 or $3\frac{1}{2}$ fathoms.

In Entering, beware of standing too far over to the eastward, as other reefs extend two miles more in that direction, a too near approach to which may be dangerous; and there are, moreover, several rocky flats between them and the shore.

The land 10 miles to the eastward of Tripoli, towards *Point Tajoura*, is low and sandy, with a grove of pine-trees. The land westward of Tripoli is also low, but it has no trees. In running along this shore, at about 3 miles from it, you will have from 23 to 18 fathoms of water.

At nearly 20 leagues to the westward of Tripoli is the little town Zoara, off which there is a road, where small vessels take in salt and salt-fish. *Tripoli Vecchia* (*pr. Vekkia*) or *Old Tripoli*, is a village 7 leagues eastward of Zoara, with a harbour practicable for small craft only.

APPENDIX.

1.—POINTS OF THE COMPASS, in ENGLISH, FRENCH, ITALIAN, &c.

<i>Points.</i>	<i>French.</i>		<i>Italian.</i>	
* <i>North.</i>	<i>Nord.</i>	*	<i>Tramontana.</i>	*
1 N. by E.	Nord quart N.E.	11° 15'	Tramontana quarto Greco.	11° 15'
2 N.N.E.	Nord nord-est.	22 30	Greco Tramontana.	22 30
3 N.E. by N.	Nord-est quart de N.	33 45	Greco quarto Tramontana.	33 45
4 N.E.	Nord-est.	45 0	Greco.	45 0
5 N.E. by E.	Nord-est quart-d'est.	56 15	Greco quarto Levante.	56 15
6 E.N.E.	Est nord-est.	67 30	Greco Levante.	67 30
7 E. by N.	Est quart N.E.	78 45	Levante quarto Greco	78 15
8 <i>East.</i>	<i>Est.</i>	90 0	<i>Levante or Levanta.</i>	90 0
* <i>North.</i>	<i>Nord.</i>	*	<i>Tramontana.</i>	360 0
1 N. by W.	Nord quart N.O.	11 15	Tramontana quarto Maestro.	348 15
2 N.N.W.	Nord nord-ouest.	22 30	Maestro Tramontana.	337 30
3 N.W. by N.	N.O. quart-de nord.	33 45	Maestro quarto Tramontana.	326 15
4 N.W.	Nord-ouest	45 0	Maestro.	315 0
5 N.W. by W.	N.O. quart-d'ouest.	56 15	Maestro quarto Ponente.	303 45
6 W.N.W.	Ouest nord-ouest.	67 30	Ponente Maestro.	292 30
7 W. by N.	Ouest quart N.O.	78 45	Ponente quarto Maestro.	281 15
8 <i>West.</i>	<i>Ouest.</i>	90 0	<i>Ponente.</i>	270 0
* <i>South.</i>	<i>Sud.</i>	*	<i>Ostro or Mezzo Giorno.</i>	180 0
1 S. by E.	Sud quart sud-est.	11 15	Ostro quarto Scirocco	168 45
2 S.S.E.	Sud sud-est.	22 30	Ostro Scirocco.	157 30
3 S.E. by S.	Sud-est quart de sud.	33 45	Scirocco quarto Ostro.	146 15
4 S.E.	Sud-est.	45 0	Scirocco.	135 0
5 S.E. by E.	Sud-est quart-de'est.	56 15	Scirocco quarto Levante.	123 45
6 E.S.E.	Est sud-est.	67 30	Scirocco Levante.	112 30
7 E. by S.	Est quart sud-est.	78 45	Levante quarto Scirocco.	101 15
8 <i>East.</i>	<i>Est.</i>	90 0	<i>Levante.</i>	90 0
* <i>South.</i>	<i>Sud.</i>	*	<i>Ostro or Mezzo Giorno.</i>	180 0
1 S. by W.	Sud quart sud-ouest.	11 15	Ostro quarto Libeccio.	191 15
2 S.S.W.	Sud sud-ouest.	22 30	Ostro Libeccio.	202 30
3 S.W. by S.	S.O. quart-de-sud.	33 45	Libeccio quarto Ostro.	213 45
4 S.W.	Sud-ouest.	45 0	Libeccio.	225 0
5 S.W. by W.	S.O. quart-d'ouest.	56 15	Libeccio quarto Ponente.	236 15
6 W.S.W.	Ouest sud-ouest.	67 30	Ponente Libeccio	247 30
7 W. by S.	Ouest quart S.O.	78 45	Ponente quarto Libeccio.	258 45
8 <i>West.</i>	<i>Ouest.</i>	90 0	<i>Ponente.</i>	270 0

Compass Card Rose de Vents.
(*Rose of Winds.*)

Fiore del Mondo.
(*Flower of the World.*)

By those Italians who use *Mezzo Giorno* for South, which seems equally common with *Ostro*, S. by E. is expressed by *Mezzo di quarto Scirocco*; S.S.E. *Mezzo di Scirocco*; S.E. by S., *Scirocco quarto Mezzo di*; S. by W., *Mezzo di quarto Libeccio*; S.S.W. *Mezzo di Libeccio*; and S.W. by S., *Libeccio quarto Mezzo di*.

2.—The MONEY, WEIGHTS, and MEASURES, of SARDINIA.

MONEY.

		Sterling Currency.	Weight.		
			£.	s.	d.
2 Denari are	1 Cagliariase	Copper.	0	0	4½
6 Cagliariresi	1 Soldo		0	1	6
5 Soldi	1 Reale		0	3	9
20 Soldi	1 Lira (old)	Silver and base metal.	0	8	0
10 Reali	1 Scudo		2	0	0
5 Lire 5 soldi	1 Doppietta		12	12	20
26 Lire 5 soldi	1 Carlino	Gold.	6	12	0
13 Lire 15 soldi	1 English Guinea		6	12	0

There is also a new livre of 10 soldi 5 denari. The old livre is a nominal coin.

The paper money consists of notes for 5, 10, and 20 scudi.

WEIGHTS.

Farm Produce and the coarser Metals are weighed by the "Pesi di Ferro," as follow:—

		Avoirdupois.			
		cwt.	lbs.	oz.	dr.
16 Sediceni,	} 1 Ounce.	12 Ounces are 1 lb. equal to	0	0	14 5
Decimisesti,		26 lbs. 1 Rubbo	0	23	4 2
or Argenti, or		4 Rubbi 1 Cantar	0	93	0 8
8 Ottave, or		10 Cantars .. 1 Colpo	8	34	5 0
4 Quarti,					

In Sassari, 4 Rubbi make the small Cantar, and 6 the large one.

The Cantar, without tare, is 100 lbs. The Cantar of Cheese is 116, on which the duty and fees of the Scrivano and Royal weigher, amount to 12½.

100 lbs. Avoirdupois used to be reckoned equal to Sard. lbs. 114·29
but according to the later comparison adopted above 111·79

LINEAR MEASURE.

The Palm, equal to English In. 10½, is divided into 2, 4, 8, 16, and 21 parts.

8 Palmi are	1 Village Canna, or English In.	82½
10 ditto	1 Sassari ditto	103½
12 ditto	1 Trabucco, or ditto	124

WINE MEASURE.

The Cagliarirese is a small retail measure, varying inversely with the price.

The Pinta, equal to 2½ Pints Eng. Wine Measure, is divided into 2 Mezzette.

		Gals.	Qts.	Pts.
5 Pinte are	1 Quartiere	1	1	0½
2 Quartieri	1 Brocca	2	2	1½
100 ditto	1 Botte	132	3	0½

OIL MEASURE.

There are 2 small retail measures, of 1 Cagliarirese, and of 3, varying inversely with the price.

		Gals.	Qts.	Pts.
2 Misure are	1 Quartuccio, equal to	0	0	0·7
12 Quartucci	1 Quartana	1	0	0·8
4 Quartane	1 Giarra	4	1	1·5
2 Giarri	1 Barrel	8	3	1
3½ Alghero measures	1 ditto			

SALT MEASURE AND WEIGHT.

1 Salm, or 1400 lbs. Sard, are equal to 32 Bushels. 2 Salms are 1 Ton.

CORN

CORN MEASURE.

The measures of Cagliari are synonymous with those of Sassari, but contain double the quantity.

CAGLIARI.	SASSARI.	Solid inches.	Bush.	P.	G.	Pts.
2 Imbuti are 1 Quarto = 4 Imbuti, or 1 Corbula		= 750	= 0	0	1	6
2 Quarti .. 1 Quarta = 2 Corbule, or 1 Starello		= 1500	= 0	2	1	4
2 Quarte, 1 Moggio, or Starello		= 3001	= 1	1	1	1
3½ Starelli	= 7 Starelli, or 1 Rasiere	= 10505	= 4	3	0	3

3.—MONEY, WEIGHTS, and MEASURES, of MALTA, as given by the CHEV. LOUIS DE BOISGELIN, in 1802.

THE people of Malta reckon by *scudi*, or crowns of 12 tarins each. A *tarin* is 20 grains. The crown, also, is subdivided into 24 *carlini*, containing 240 grains, or 1440 *piccioli*.

A crown is exactly two shillings, and a tarin two pence.

This money is of different value; being sometimes of silver, and sometimes of copper. The silver is worth 50 per cent. more than the copper.

The current coin are Louis d'Or, (with the Grandmaster's effigy) of 8 crowns or 16 shillings; crowns of 12 tarins; pieces of 8, 6, 4, and ½ tarins; of 15, 10, 5, and 1½ grains worth of silver.

FOREIGN COINS current in Malta.

Spanish Pistole, value in copper	56 tarins; in silver,	84 tarins.
Sequins and Ducats	32	48
A Livournine	15½	23½
Spanish Piastre	16	24

According to this evaluation, the Maltese silver crown contains 27 *as* of fine gold, or 382 of fine silver; and the copper crown 18 *as* of fine gold, or 255 of fine silver: the former, therefore, is on a par with 38½ Dutch sols, and the latter 25½ of ditto. The Dutch sol is worth about one penny.

The WEIGHTS most in use in Malta.

The *rotolo* weighs about two pounds and a half. The *cantaro* or *quintal*, of 100 rotoli, makes 156½ pounds, Amsterdam weight: 100 pounds Amsterdam commercial weight makes 108½ English avoirdupois: 100 pounds English avoirdupois make 91½ pounds of Amsterdam commercial weight.

The Sicilian weights being much used in Malta, it is necessary to remark that, in that island there are two sorts of *cantaro*, the one called *peso grosso* or *alla grossa*, and the other *peso sottile* or *alla minuta*: the difference between these two is a little more than 10 per cent.

A *salma* is equal to 25 pounds.

MEASURES OF LENGTH.

The *canna* is divided into 8 *pans*, of 9 inches 8 lines each. It measures 6 feet, 5 inches, 4 lines. The foot is 11 inches 2 lines, English measure.

LIQUID MEASURES in Malta and Sicily.

Caffi is employed for oil, and weighs 19 pounds.

Salma, a wine measure, containing 18 *quartonts*; and a quartont 12 *cartucci*.

Salma, a liquid measure in the kingdom of Naples, contains 10 *stars*. A star is 32 *pignotoli* or *pots*, and each pot is about a Paris pint; consequently a *salma* contains about 320 Paris pints, which make nearly 650 English pints.

MEASURES FOR DRY GOODS.

Salme, a corn measure, makes $3\frac{3}{4}$ Leghorn sacks: the Leghorn sack of wheat contains 162 pounds, and a sack of flour 150 of the same. An Amsterdam last contains $61\frac{1}{2}$ Maltese Salmes. One hundred Leghorn pounds make $69\frac{1}{7}$ Amsterdam commercial pounds, which make $108\frac{1}{2}$ English avoirdupois.

The *Salme* at Palermo is divided into 16 *tomoli*, which are divided into 4 *mendits*. Ten *salmes* $\frac{2}{3}$ make an Amsterdam last. This kind of *salme* weighs 2 *cantari*, and 64 *rotoli alla minuta*.

4.—TRADE AND QUARANTINE REGULATIONS OF MALTA.

VALETTA, &c.—*Trade of Malta*, 15th January, 1819.—“The duty of one-half per cent. heretofore levied on all goods exported from this island is abolished, and vessels’ manifests outwards no longer required.

“Vessels putting in here, either through stress of weather, or for information, may remain 48 hours without being obliged to deliver up their papers, and are at liberty to sail again within that period, subject only to the payment of one tari per ton for anchorage-dues, and for water if required. Vessels intending to avail themselves of this privilege, are directed to come into the Quarantine Harbour, but are not on that account subjected to any further charge.

“The Excise Import Duty on Rum, the produce of the colonies and possessions of Great Britain, is taken off.

“The quarantine charges are also reduced.”

MALTA, 20th of April, 1826.—“The Board of Health has resolved that men-of-war shall, in future, ride out, in the quarantine-harbour, the whole period of quarantine established against the place from which they may come, not deducting, as heretofore, the days of the voyage. It is considered by the Board that the observance of these conditions will lead to no public inconvenience, not fully compensated by the advantages which will result to the trade of Malta; for it is supposed that this resolution of the Malta Board of Health will obviate the objections upon which the principal Mediterranean States have heretofore declined to admit into their ports vessels from Malta, on the same terms upon which admission is granted to vessels coming from their respective ports. The Board has also established quarantine against Gibraltar, Spain, the West Indies, and the continent of America, the period of which will be regulated by circumstances.”

14th June, 1826.—“An official communication has been received from the Board of Health at Genoa, intimating that free pratique will be granted to all vessels arriving from Malta; and it is expected that communications equally satisfactory will shortly be received from the respective Boards at Marseille, Leghorn, and Naples. The benefit that will accrue to the commerce of this island from free pratique with the continent, there is every reason to believe, will be found equally advantageous to the continental ports trading with us; and, considering the great local superiority of our lazaretto, insulated and surrounded by a spacious harbour solely devoted to quarantine purposes, with a most efficient quarantine establishment, certainly no place can be better entitled to free pratique, or to greater confidence, than Malta.

“The resolution of our Board to place men-of-war on the same footing as merchant-vessels, with regard to quarantine, has been of much service, and this resolution is most strictly adhered to. His Majesty’s ship Zebra, which arrived here lately from Smyrna, after a passage of thirty-one days, notwithstanding that she had no communication during her voyage, and that the most perfect health was enjoyed by all on board, was ordered to perform thirty days quarantine: in fact, our Board has resolved to enforce, on all occasions, the most rigid system of quarantine.”

Malta.—30th August, 1826.—“Official despatches have been received from the authorities at Leghorn, intimating that all vessels arriving in that port, with clean bills of health from this island, will be admitted to immediate pratique.

“The Board of Health of Leghorn, in thus following the course pursued by those of Genoa and Marseille must be fully convinced of the efficacy of our quarantine regulations, and of the inflexibility and integrity of our newly-established Board of Health.

Sept.

Sept. 20, 1826.—“ Dispatches have been received from the Board of Health at Palermo, containing similar information, that departures from our port with clean bills of health will be admitted immediately to free communication in all the ports of Sicily. The concurrence of the Neapolitan government in the correct view which the other European states have taken of our insulated situation, and of the peculiar aptitude of our island for quarantine purposes, crowns with final success the hopes and expectations of all.”

The following table of dues, authorized to be levied for account of the Government of Malta in the quarantine office, was officially published in the *Malta Gazette* of the 20th of January, 1830:—

“ *Ships in Quarantine.*

“ For every vessel arriving with a clean bill of health.

	Entrance Fee.		
	£.	s.	d.
Not exceeding 50 tons	0	16	8
Above 50 and not exceeding 100 tons ..	1	5	0
Above 100 and not exceeding 150 tons -	1	13	4
Above 150 and not exceeding 200 tons -	2	1	8
Above 200 tons	2	10	0

“ And every such vessel, in addition to the above respective rates, for guards and guard-boats, per day, 4s. 2d.

“ N.B. 1. Vessels arriving with a foul or touched bill of health to pay double the above rates respectively, and all vessels arriving from Turkey in Europe, Anatolia, Karamania, Syria, Egypt, Cyprus, Candia, Morea, and all their adjacent islands, are to be considered as with a touched bill of health, when the plague does not exist in any of the above-mentioned places.

“ 2. Vessels subject to a quarantine of observation of five days, or under, are only to be charged with the pay of the Guardian at the rate of 2s. 6d. per day.

“ 3. Vessels waiting for order or convoy, and performing no mercantile operation, and neither landing, transshipping, nor receiving on board passenger or baggage, are exempted under Proclamation No. II. 1828, from the payment of Health Office dues, and during their stay in the Quarantine Harbour are to be charged only with 3s. 4d. per day.

“ Boats employed in the Coral Fishery are chargeable with only 1s. 8d. per day each, besides the pay of the necessary guardians at 2s. 6d. per day each.

“ *Effects undergoing Quarantine.*

“ 1. A duty of half per cent. *ad valorem* shall be levied on goods brought by vessels performing above five days' quarantine and under 10, but on such portion only of the cargo as may be landed in Malta, whether in deposit or not.

“ 2. The said duty shall be levied on all goods brought by vessels performing 10 days' quarantine and upwards, whether admitted to *pratique* on board, landed, or transhipped, excepting, however, cotton wool exported for England after depuration: and all goods received into the lazaretto for depuration shall be chargeable with a due proportion of the actual expences thereof, viz. at the rate of 2s. per day for one guardian, and 1s. 8d. for each labourer that it may be necessary to employ.

“ *Cattle landed in the Lazaretto to pay as under:—*

	s.	d.
1. For each horse, mule, or ass	5	0
2. For each bullock	2	0
3. For each sheep, goat, pig, or other small animal	1	0

“ *Persons performing Quarantine in the Lazaretto.*

For each apartment occupied—Entrance fee	16	8
Secondly, for guards, per day	2	6
Certificates or extracts under the office seal	4	2

“ By command of his Excellency the Lieutenant-Governor,

“ *Palace, Valetta, Jan. 1.*”

“ FRED. HANKEY,
Chief Secretary to Government.”

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